TECHNOLOGY DEPT.

The Manufacturing Confectioner

PUBLIC LIBRARY
DEC 15 1950
DETROIT

PIONEER SPECIALIZED PUBLICATION FOR CONFECTIONERY MANUFACTURERS

Chocolate and the Cocoa Bean: A Research Director tells of the latest work in this field

•

Candy Cooling Tunnel Design: A continued study of these factors by a design engineer

•

A packaging materials forecast by industry leaders at recent Packaging Institute Conference

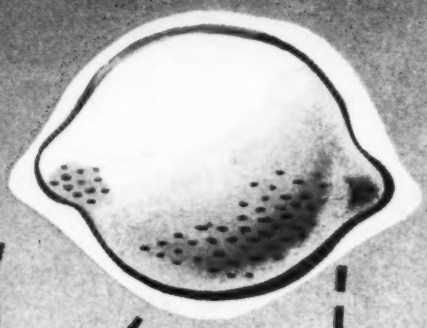
DECEMBER
1950

now — more than ever —

the more you **COMPARE**

the more obviously **SUPERIOR**

you'll find



MAGNA LEMON OIL

AMERICAN U.S.P.

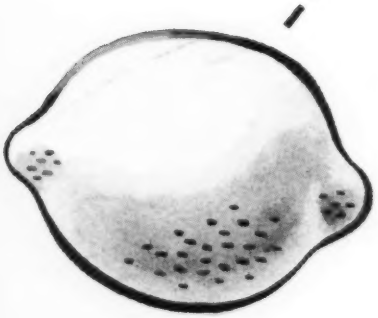
with the Magna-fied true-lemon flavor

FIRST! COMPARE POTENCY! Your own laboratory tests will give you *positive proof* that no other lemon — Yes, NO other lemon — has as much intensified flavor as MAGNA LEMON OIL!

NEXT! COMPARE PRICE! Not only does MAGNA LEMON bring you the potency-plus and silken smoothness that gives every batch mouth-watering delectability *beyond* comparison—BUT MAGNA LEMON COSTS NO MORE! Yes, ACTUALLY LESS than any other *premium* brand!

SO COMPARE! The results will prove to you — beyond the shadow of a doubt — that MAGNA LEMON OIL is far superior *in every respect* to any other premium brand!

Write for further information and schedule of prices. Free samples, of course!



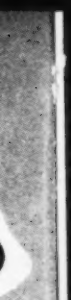
Magna-fied Goodness!
MAGNA LIME OIL
DISTILLED OR EXPRESSED
The true fruit oil at its delicious best!

MAGNUS, MABEE & REYNARD, INC.

SINCE 1895 ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK CITY • 221 NORTH LASALLE STREET, CHICAGO

LOS ANGELES: BRAUN CORP • SEATTLE, PORTLAND, SPOKANE: VAN WATERS AND ROGERS, INC. • SAN FRANCISCO: BRAUN-KNECHT-HEIMANN CO.



co.

for

• ALVA FLAVORS • ALVA FLAVORS • ALVA FLAVORS • ALVA FLAVORS •

There's a TECHNICAL *reason*

The latest in modern processes and equipment . . . . the adaptation of new low-temperature extraction techniques . . . adequate, unhurried research into the micro-chemistry of basic flavoring. With such unmatched technical background it's logical that Alva Flavors are better.

Alva IMITATION Lime Oil

offers the candy maker a real economy with no deviation in flavor quality . . . . an imitation, brilliantly matching the flavor of pure oil of limes.

Used: ½ ounce per 100 lbs. of hard candy.

Have you seen the ALVALUE Line of imitation hard candy flavors?
Cherry - Grape - Pineapple - Raspberry - Strawberry - Banana.

Write for the big complete ALVA catalog and see ALVA Flavors' complete line in every quality, strength and price class.

VAN AMERINGEN-HAEBLER, INC.
521 WEST 57th STREET
NEW YORK 19, N. Y.

• ALVA FLAVORS • ALVA FLAVORS • ALVA FLAVORS •

CHERRY! THAT'S FOR ME!

Ah, yes! A perennial favorite, cherry. But how many other flavors there are equally enjoyed day in, day out, by young and old. Peppermint . . . Vanilla . . . Chocolate . . . Maple . . . Lime. Consumer preferences vary so that to favor one, is to deny the rest. Similarly, it is our aim to supply, not one or two outstanding specialties, but a full and complete line of fine, dependable flavors, any one of which will be a creditable addition to the confectionery or food producer's line. For faultless and all-around good taste, buy FRITZSCHE. . . .

A FIRST NAME IN FLAVORS SINCE 1871.

Listing a complete and unexcelled line of flavors is our current catalog: "FLAVORS by FRITZSCHE". Write us for your copy.

FRITZSCHE *Established* 1871 *Brothers, Inc.*

PORT AUTHORITY BUILDING, 76 NINTH AVENUE, NEW YORK 11, N. Y.

BRANCH OFFICES *and* °STOCKS: *Atlanta, Georgia, Boston, Massachusetts, °Chicago, Illinois, Cincinnati, Ohio, Cleveland, Ohio, °Los Angeles, California, Philadelphia, Pennsylvania, °San Francisco, California, °St. Louis, Missouri, °Toronto, Canada and °Mexico, D. F.* FACTORY: *Clifton, N. J.*

The Manufacturing Confectioner

READ WHEREVER CANDY IS MADE

DECEMBER, 1950
Vol. XXX No. 12

From the Desk of the Publisher 7

Chocolate and the cocoa bean ..... Norman W. Kempf 27
Factors affecting precursors and some of the experiments being carried on to improve flavor.

Design considerations for candy cooling tunnels: Part II ..... J. E. Salmon 29
Continuation of discussion in the November issue.

Can we simplify chocolate handling? ..... Melvyn J. Mickevicz 34
Proper seeding of chocolate and basic methods of achieving this.

A Digest of Technical Literature 35

Candy making for the beginner: Lesson II ..... Alfred E. Leighton 36

Candy clinic: Selected best candies of the year 38

Confectioners' Briefs 48

News of associations 50

Supply field news 53

Packaging materials—a forecast 55
Leaders in packaging field discuss possible shortages.

Confectionery brokers 62

The clearing house: classified advertising 65

Editorial index of articles for 1950 67

Advertisers' index 71

Editorial—General review of confections for 1950 ..... Eric Lehman 72

COVER: The chocolate Christmas candle. Symbol of the holiday season.

EARL R. ALLURED
FOUNDER

EDITOR AND PUBLISHER
P. W. Allured

TECHNICAL EDITOR
Wesley H. Childs

NEW YORK STAFF WRITER
Clara Baldwin

EASTERN MANAGER
Stanley E. Allured

CIRCULATION DIRECTOR
James W. Allured

ADVERTISING OFFICES

Chicago 6, 9 South Clinton
***Allen R. Allured*, Franklin 2-6369**

New York 18, 303 W. 42nd St.
***Stanley E. Allured*, Circle 6-6456**

London, England, 21B Salisbury Road
Hove, Sussex
L. M. Weybridge

MEMBER AUDIT BUREAU OF CIRCULATIONS

Pioneer Specialized Publication for Confectionery Manufacturers Plant Management, Production methods, Materials, Equipment, Purchasing Sales, Merchandising.

Published Monthly on the 5th by **The Manufacturing Confectioner Publishing Company**, publishers of **The Manufacturing Confectioner—The Blue Book—The Candy Buyers' Directory—Candy Merchandising.** Executive offices: 9 South Clinton Street, Chicago 6, Illinois. Telephone FRanklin 2-6369. Eastern offices: 303 West 42nd Street, New York City 18, N. Y., Telephone CIrcle 6-6456. Publication Office: Pontiac, Illinois.

Copyright, 1950, Prudence W. Allured. All rights reserved.

Subscription prices One Year, $3.00. Two years, $5.00. Per Copy, 35c, except September 'Purchasing Executives Issue": $2.00. In ordering change of address, give both old and new address. Entrd as Second Class Matter, April 20, 1939, at the Post Office at Pontiac, Illinois, under the Act of March 3, 1879. Member: National Confectioners' Ass'n, Western Confectionery Salesman's Ass'n, National Candy Wholesalers Ass'n, Audit Bureau of Circulations, National Conference of Business Paper Editors. Foreign Subscriptions: One Year, $4.00. Two years, $7.00. Canadian Subscriptions: same as U. S.

THE Standard

Exchange

CITRUS PECTIN *for* CONFECTIONERS

WIRE OR WRITE FOR SAMPLES AND FORMULAS

Candy is Delicious Food
ENJOY SOME EVERY DAY!

CALIFORNIA FRUIT GROWERS EXCHANGE

400 W. Madison Street, Chicago 6, Ill.

PRODUCTS DEPARTMENT
ONTARIO, CALIFORNIA

99 Hudson Street, New York 13, N. Y.

USED BY LEADING CANDY MANUFACTURERS THROUGHOUT THE WORLD

From the Desk of the Publisher

AS IN previous years, the December number of THE MANUFACTURING CONFECTIONER contains the Editorial and Author's Indices. Much time and effort are expended by the Staff in compiling this record; many sub-divisions are necessary to enable cross reference and easy tracing of that elusive article, the exact title of which may escape memory.

At my desk, I think of the Annual Index as a sort of stocktaking. I notice that in 1950 as in previous years, we have had many HOW articles—"How To Do This," and "How To Do That."

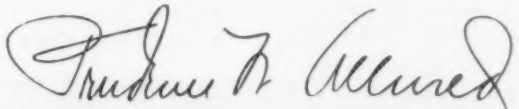
That little word—*how*—an adverb, the dictionary states, and gives the meaning as "in what manner," or "by what means." We all like to know *how* to do things better, *how* to live better and more useful lives, and we, at THE MANUFACTURING CONFECTIONER, wish to be of service continually to the confectionery industry and to our subscribers, especially.

We believe we are performing a service when we submit an answer to inquiries of a perplexing nature. Though we may not be right all of the time, (we sprout no wings), we do try earnestly and sincerely to correctly answer each and every question. And there are times when we almost tear our hair when the mail brings an especially difficult problem.

We wish to call your attention to Eric Lehman's Summary of the 1950 Candy Clinic Analyses on page 72. Compare this with Mr. Lehman's Comments on the 1949 Candy Clinic. "How are You?" and "How are Your Candies?" Though ours may be a sweet business, some sour notes must creep in to keep us on our toes.

When you are in Chicago, do stop at our office, we wish to say, "How." And when you are in New York, stop at 303 West 42nd Street and say. "How" to Stanley.

Another Christmas is on the way with a New 1951 coming on Santa's heels, so Merry Christmas and a Sweet and Happy New Year.



Publisher-President

The Nation's favorite candies are Almond Candies

famous Loft Candies include Milk Chocolate Almonds, Almond Nougats, Jordan Almonds

Five ways you win with Blue Diamond Almonds

1. They give your product an unmistakeable mark of quality in appearance and flavor.
2. They help build sales . . . the consumer preference for almonds is long-established.
3. They offer you assured quality . . minimum moisture content, no foreign particles, no bitters.
4. They cost you less to handle. OUR quality safeguards minimize YOUR handling costs.
5. They are available whole . . . natural or blanched, sliced, diced, halved, split, chopt, or slivered, according to your needs.

In 178 Loft Candy Shops in their area, and in leading department stores throughout the country, this nationally known manufacturer-retailer upholds a 90-year-old reputation for fine candies. Like so many others, the Loft Candy Corporation takes full advantage, saleswise, of the fact that *people like almond candies.* Favorite items in the Loft line contain California's famous Blue Diamonds . . . *the finest almonds you can buy.* For full information consult your Blue Diamond representative, or write us. We're almond specialists and have been for forty years.

FREE BOOKLET "FORMULAS FOR CANDYMAKERS" MAILED FREE ON REQUEST . WRITE FOR YOUR COPY

BLUE DIAMOND ALMONDS BRAND

CALIFORNIA ALMOND GROWERS EXCHANGE

Sacramento, Calif. • Sales Offices Chicago and New York

WILD CHERRY IMITATION 1535

Put this LEADER among flavors to work *selling your line.*

Tangy and refreshing . . . 1535 Wild Cherry never fails to win instant and lasting friends the first time tasted . . . almost belies the word imitation.

H. Kohnstamm's famous flavor chemists have given to 1535 Wild Cherry not only a truly distinctive delightful taste but also *real heat resistance* to hold that flavor under high cooking temperatures.

One Hundredth Anniversary

Get acquainted with 1535 Wild Cherry or other Atlas heat-resistant imitation flavors (1500 Line): Raspberry, Grape, Pineapple, Strawberry, Orange, Banana, Apple, Pear, Lemon, Lime, Peach, Rum, Rum and Butter. *Write, wire or phone a trial order today . . .*

FIRST PRODUCERS OF CERTIFIED COLORS

H. KOHNSTAMM & COMPANY Inc.

ESTABLISHED 1851

89 PARK PLACE, NEW YORK 7 · 11-13 E. ILLINOIS ST., CHICAGO 11 · 4735 DISTRICT BLVD., LOS ANGELES 11

ATLANTA · BALTIMORE · BOSTON · CINCINNATI · CLEVELAND · DALLAS · DETROIT · HOUSTON · INDIANAPOLIS · KANSAS CITY, MO. · MINNEAPOLIS · NEW ORLEANS · OMAHA · PHILADELPHIA · PITTSBURGH · ST. LOUIS · SAN FRANCISCO

FOR TASTE IMPROVEMENT...

FAR-WESTERNERS, TOO *Favor the Flavor*

with

PFIZER ACIDULANTS

From Sunset Boulevard to the Boston Post Road, Pfizer Quality Acidulants are country-wide favorites for improving the taste of fruit-flavored candy. "Treated" this way, even the best flavors get a taste-tingling lift. What's more, free-flowing, non-caking Pfizer Acidulants dissolve *fast* . . . cut costs . . . give you even acidulation every time.

PFIZER QUALITY

PFIZER

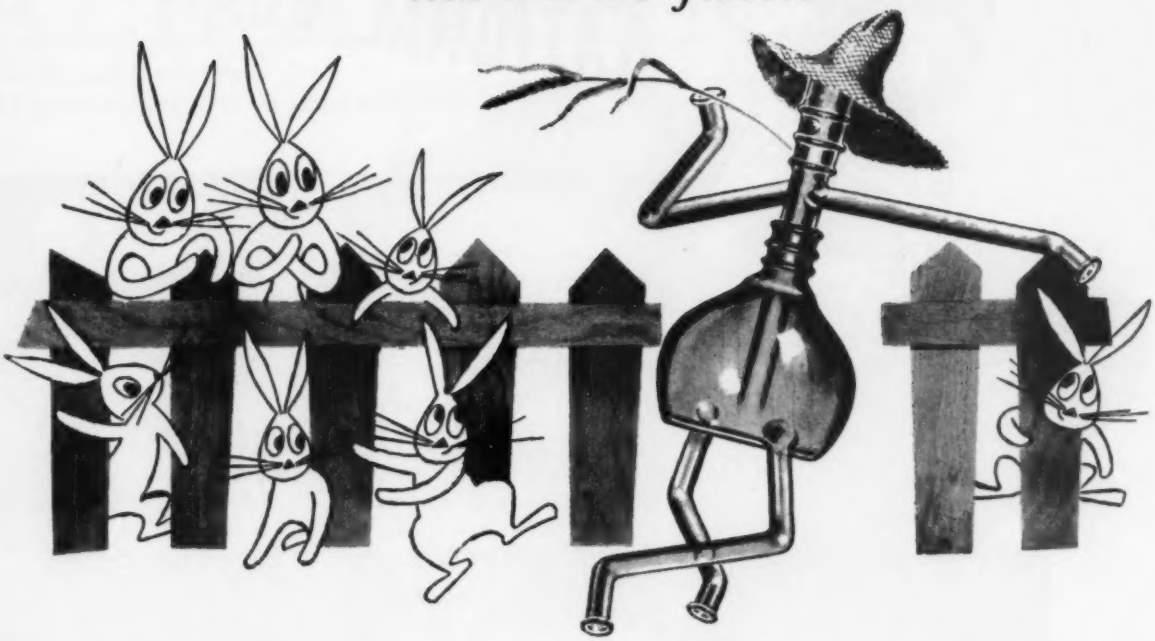
ANHYDROUS CITRIC ACID • CITRIC ACID • TARTARIC ACID • SODIUM CITRATE • CREAM OF TARTAR • CAFFEINE

CHAS. PFIZER & CO., INC., 630 FLUSHING AVE., BROOKLYN 6, N. Y.; 425 NORTH MICHIGAN AVE., CHICAGO 11, ILL.; 605 THIRD ST., SAN FRANCISCO 7, CALIF.

if you want

repeat sales

look to D&O flavors



Impulse buying,
packaging or any number
of visual attributes may sell
your candy the **FIRST TIME.**
But what about the second time...
and is there a third and fourth
and tenth time? Candy manufacturers
know that the over-all success of their
product is determined by **FLAVOR AND TASTE.**
It's the flavor and taste that create
the remembrance value and the repeat sales.
D&O Flavors have the rare quality
that moves candy off the retailer's shelf
and counter. Let D&O show you how.

D.O DODGE & OLCOTT, INC.

180 Varick Street • New York 14, N. Y.

ATLANTA • BOSTON • CHICAGO • CINCINNATI • DALLAS • LOS ANGELES • PHILADELPHIA • ST. LOUIS • SAN FRANCISCO

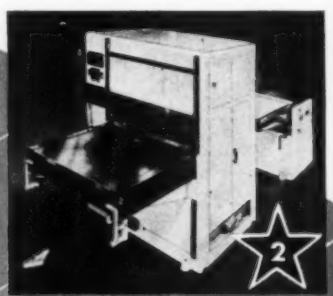
ESSENTIAL OILS • AROMATIC CHEMICALS • PERFUME BASES • VANILLA • FLAVOR BASES

IF YOUR GOAL IS PROFITS . . . T

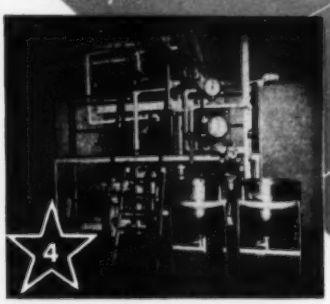
NATIONAL EQUIPMENT

Defensively, too, this is the team that holds the line against rising costs!

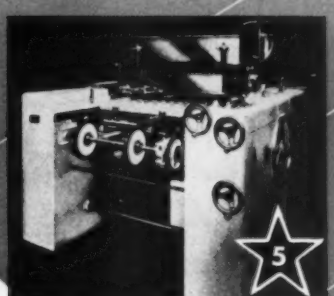
M-100 ALL-NEW MOGUL
All-Steel, Heavy-Duty, Ball-Bearing



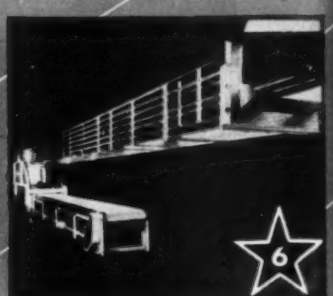
NEW NATIONAL ENROBER
"Clean-lined", Sanitary, High-Gloss



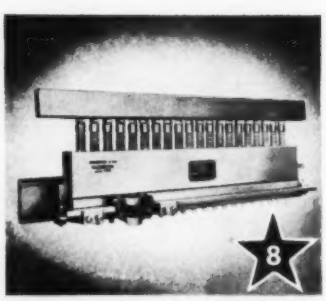
NATIONAL AUTOMATIC FONDANT COOLING & BEATING PLANT



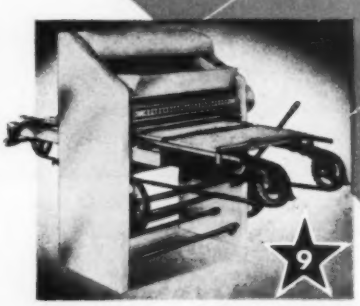
NEW D-100 DEPOSITOR
Ball-Bearing, 100% Accurate



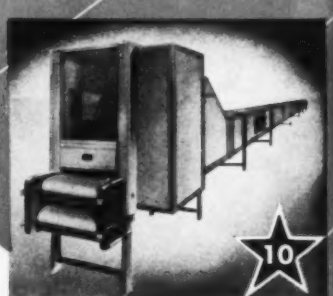
NEW NATIONAL AUTOMATIC MULTI-TIER COOLER & PACKER



HYDRO-SEAL 'Silvretone' PUMP BARS
All Sizes, Single or Multi-Row



NEW NATIONAL CHERRY DROPPER
Automatic (Separate or with Mogul)



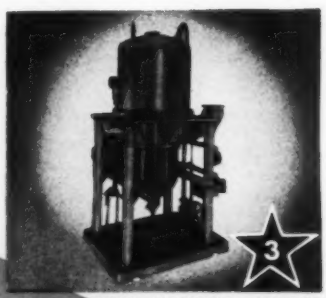
NATIONAL COOLER & PACKER
Tunnel Type, High Speed, High-Gloss

NATIONAL

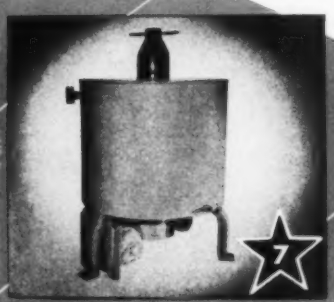
...THIS IS YOUR TEAM

PRESENTS *The Candy Industry's*

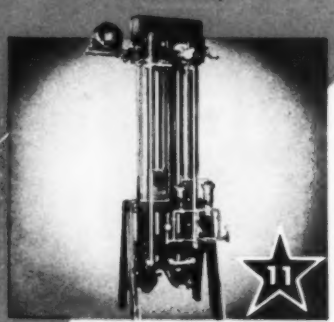
ALL-AMERICAN ELEVEN



HARD CANDY VACUUM COOKER
Continuous, "Hi-Gloss", High Speed



CHOCOLATE MELTING KETTLES
New, Sanitary



NATIONAL CHOCOLATE TEMPERING COLUMNS (1, 3 and 5 column units)

A great team of tested and proven performers — *trained* by foremost engineers — *coached* by a half-century of experience — possessive of that extra degree of stamina so necessary in standing-up to and delivering against tough — really tough — competitive requirements.

Each, in its own position, is a top field-performer — adjudged so by the country's leading candy manufacturers . . . and, it is largely due to their glowing words of endorsement that we rate them here, for you, as National's All-American Eleven.

Among this Eleven, there's certainly one or several pieces of equipment that can help you increase your plant's productive effectiveness . . . and in obtaining it, decrease operating costs.

Remember, this National Eleven is now in full readiness—any one member is available on a prompt delivery basis, and installable on any week-end appointment of your making, without a moment's shut-down in your operations.

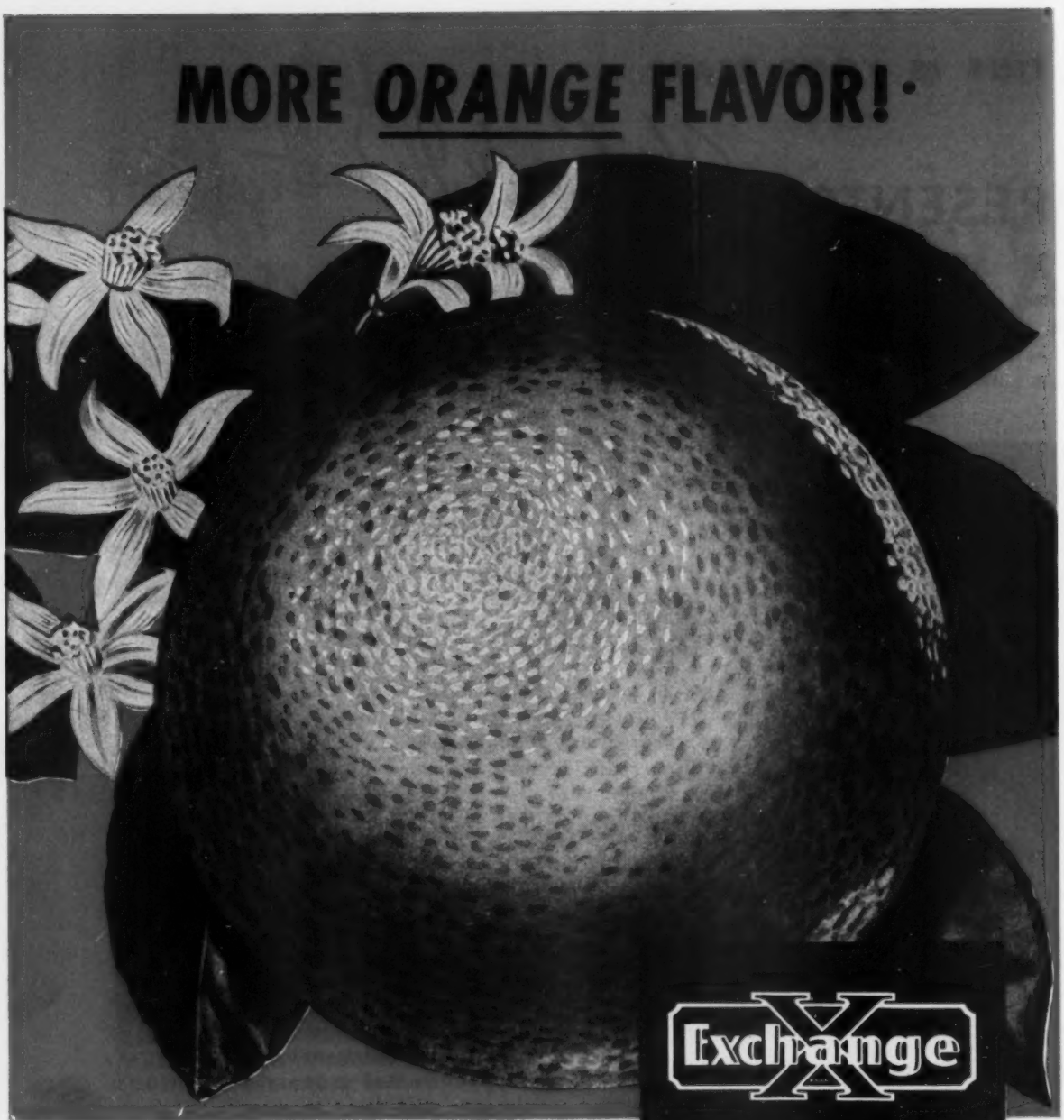
Our suggestion is that you phone, wire or write at once for complete details . . . remembering, that a few months from now the defense effort may not only affect delays—but prices, too. Right now, this All-American Eleven is holding the price line to your advantage!

Act Now . . . Today!

EQUIPMENT CORPORATION

153-157 CROSBY STREET, NEW YORK 12, N.Y.

MORE *ORANGE* FLAVOR!



Flavor is the thing that makes your product stand out from others. And Exchange Oil of Orange *has* the flavor...that distinctive and preferred taste unique to oranges grown in the sunny, sheltered valleys of California.

Try Exchange Oil of Orange for yourself. Give it all your tests for *quality, uniformity* and *strength.* You'll like it...and you'll buy it!

Exchange

OIL OF ORANGE U.S.P.

Distributed in the United States exclusively by

FRITZSCHE BROTHERS, INC.
76 Ninth Avenue, New York 11, N. Y.

DODGE & OLCOTT, INC.
180 Varick Street, New York 14, N. Y.

Distributors for:
CALIFORNIA FRUIT GROWERS EXCHANGE
PRODUCTS DEPARTMENT, ONTARIO, CALIF.

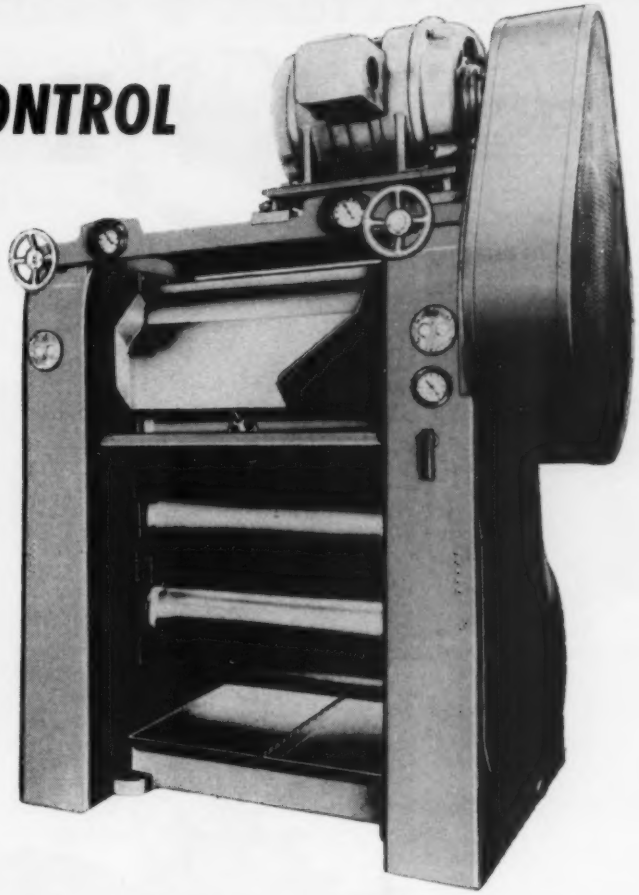
Producing Plant:
The Exchange Orange Products Co., Ontario, Calif.

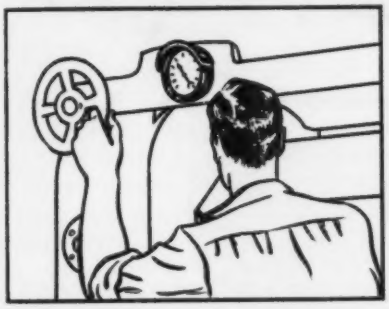
THE NEW LEHMANN CHOCOLATE REFINER

with

SIGHT-O-MATIC CONTROL

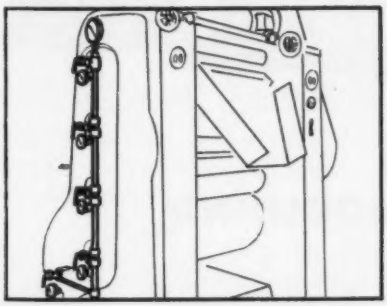
can reduce your production costs





Effect of handwheel adjustment is seen instantly in the gauge.

Pneumatic Discharge Control provides means for setting knife pressure for most efficient take-off.



Dial thermometers indicate temperature of cooling water in manifold and at discharge of each roll.

The new Lehmann 651-CV Five Roll Chocolate Refiner with Sight-O-Matic Control reduces the human element in refiner operation, saves time and increases output and fineness of chocolate.

With Sight-O-Matic Control you can duplicate roll settings as fast as you can say: "I'll have the same" No extensive previous experience is necessary. You can adjust instantly to any setting specified for a given formulation. Equalization of pressure to maintain uniformity of grind along the entire face of the roll is greatly simplified.

Half of the handwheel adjustment positions are eliminated. Intermediate rolls No. 2 and No. 3 position themselves automatically as a result of adjusting the two handwheels at the top roll.

Pressure of the take-off knife is controlled through a pneumatic system, with an air gauge and regulating valve arrangement to permit accurate setting. The operator can select the optimum pressure and reset to it repetitively. A manually operated air switch controls application of the knife assembly to or its removal from the working position. This controlled pressure system prevents loss of material past the knife blade due to faulty adjustment, thus increasing production substantially.

Send for further details

LEHMANN

J. M. LEHMANN COMPANY, Inc.

MAIN OFFICE AND FACTORY: 546 NEW YORK AVE., LYNDHURST, N. J.

This is a sign
the candy's good!

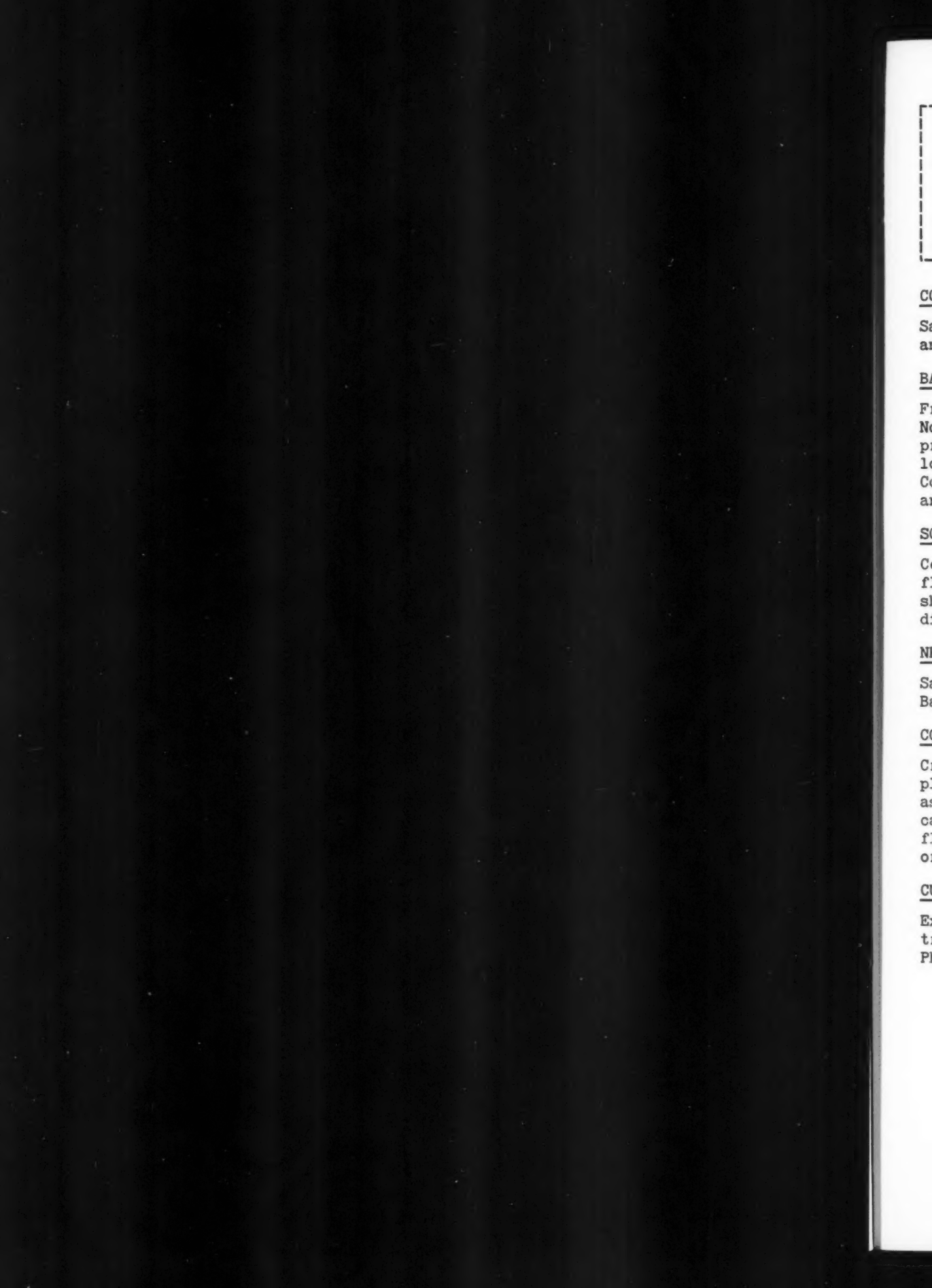
and this..
is a sign that helps you
make sure the candy's good!

Use Anheuser-Busch
DUSTING, THIN-BOILING & MOULDING

STARCHES
CORN SYRUPS

Let us tell you more about these
fine ingredients for finer candies

Corn Products Department
ANHEUSER-BUSCH, INC. · · · ST. LOUIS



COCONUT NEWS & PREVIEWS

By Charles B. de Maya
Mgr. Franklin Baker Laboratories

and Max E. Ruehrmund
Mgr. Franklin Baker Industrial Service Laboratory

COCONUT SUPPLY OUTLOOK

San Pablo, Philippine Islands—The 1950 coconut crop continues to be excellent, and shipments to the U. S. continue at a normal rate.

BAKER'S COCONUT PRICES REDUCED

Franklin Baker's established policy of pricing on costs, as reported in the November "News and Previews," resulted on November 8th in a one-cent-per-pound price reduction on all cuts of Baker's famous Gem Brand Philippine Coconut. The lower price reflects improved manufacturing facilities in all phases of Baker's Coconut processing, beginning at the San Pablo, Philippine Islands, plant and continuing through to the actual delivery to manufacturing confectioners.

SOFT FLAVORFUL COCONUT CENTERS

Centers for chocolate-covered bars and fondant-covered bonbons have hit a new flavor peak—thanks to Creamed Coconut. Through its use, candies enjoy a lengthened shelf-life, improved moisture-retention characteristic, and a more thorough distribution of coconut flavor. Result: Enthusiastic consumer acceptance.

NEW PRODUCTION RECORD

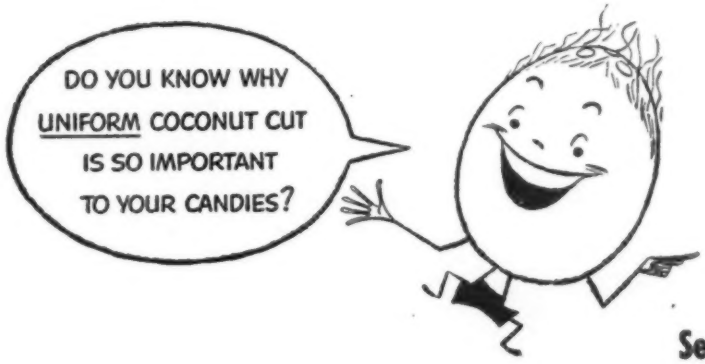
San Pablo, Philippine Islands—November 6, 1950—FLASH—new record for Franklin Baker—one-day production of coconut reached new high today.

COCONUT HARD CANDY CENTERS

Creamed Coconut blended with powdered sugar can now be honeycombed or used as a plastic center in hard candies. This coconut filling, handled in the same manner as other nut butter paste filling, makes a delicious and different coconut hard candy. This is a top flavored center in combination with a hard candy jacket flavored with vanilla, pineapple or almond. Also blends well with butterscotch or molasses.

CUT UNIFORMITY MAY BE EVEN FURTHER IMPROVED

Experiments on coconut cut—the size and shape of the particle—are about to be transferred and enlarged even more at the Franklin Baker plant in San Pablo, Philippine Islands.



See next page

UNIFORM CUT

...ANOTHER IMPORTANT FACTOR IN COCONUT FLAVOR CONTROL

Improved Processing Helps Candymakers Maintain Quality Standards

Uniform particle size is of prime importance to the manufacturer of coconut candies. It has a direct effect on the character of the candy—the texture of the piece, its moisture-content, its absorption of syrup—and, in general, on the taste sensation—the flavor of the candy.

Your customers judge each of your coconut candies by its particular characteristics. And their repeat purchases are based on recollections of the shape of the piece, the texture—its creaminess or chewiness, and other pleasures they remember from their original trial.

Your sales success depends on that constant uniformity of your products.

Every step of Franklin Baker processing is controlled. From shredder into drier, from drier to sieve, and on into moisture-proof bags, the entire process is modern, sanitary, and entirely mechanical. *Speed* in processing insures the maximum of coconut flavor—yet Franklin Baker's improved methods also give you the exact cut you require.

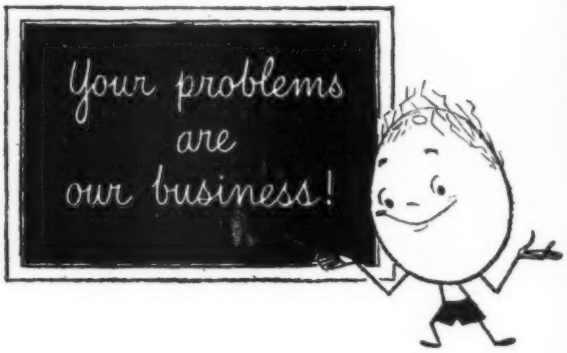
Franklin Baker's haste (which is so necessary in processing) does *not* make waste for you.

This you may be certain of: The coconut you receive—the cut you order—is exactly what you specify, shipment after shipment.

Candy Manufacture Aided By Uniform Coconut Cuts

For you to obtain a perfect, homogeneous blend of all ingredients in your coconut candy formula, a uniform coconut cut is a real advantage.

Day in, day out, you can be helped in maintaining an efficient operation and uniform candies—in every sense—with the aid of uniform coconut cuts.



Improved Processing: Your Advantage

The only way to control coconut cut is to control the processing of the coconut.

That is the Franklin Baker way.

By such direct control, and because Franklin Baker has become the Headquarters for Coconut, we have a market for every type of coconut. There is never a need for mixing off-cuts into the cut you require. Somebody, somewhere, always needs every type of coconut we can produce.

Having production difficulties? Starting new pieces? Improving old ones? The Franklin Baker Laboratory and our scientifically trained experts are at your service—*free!*

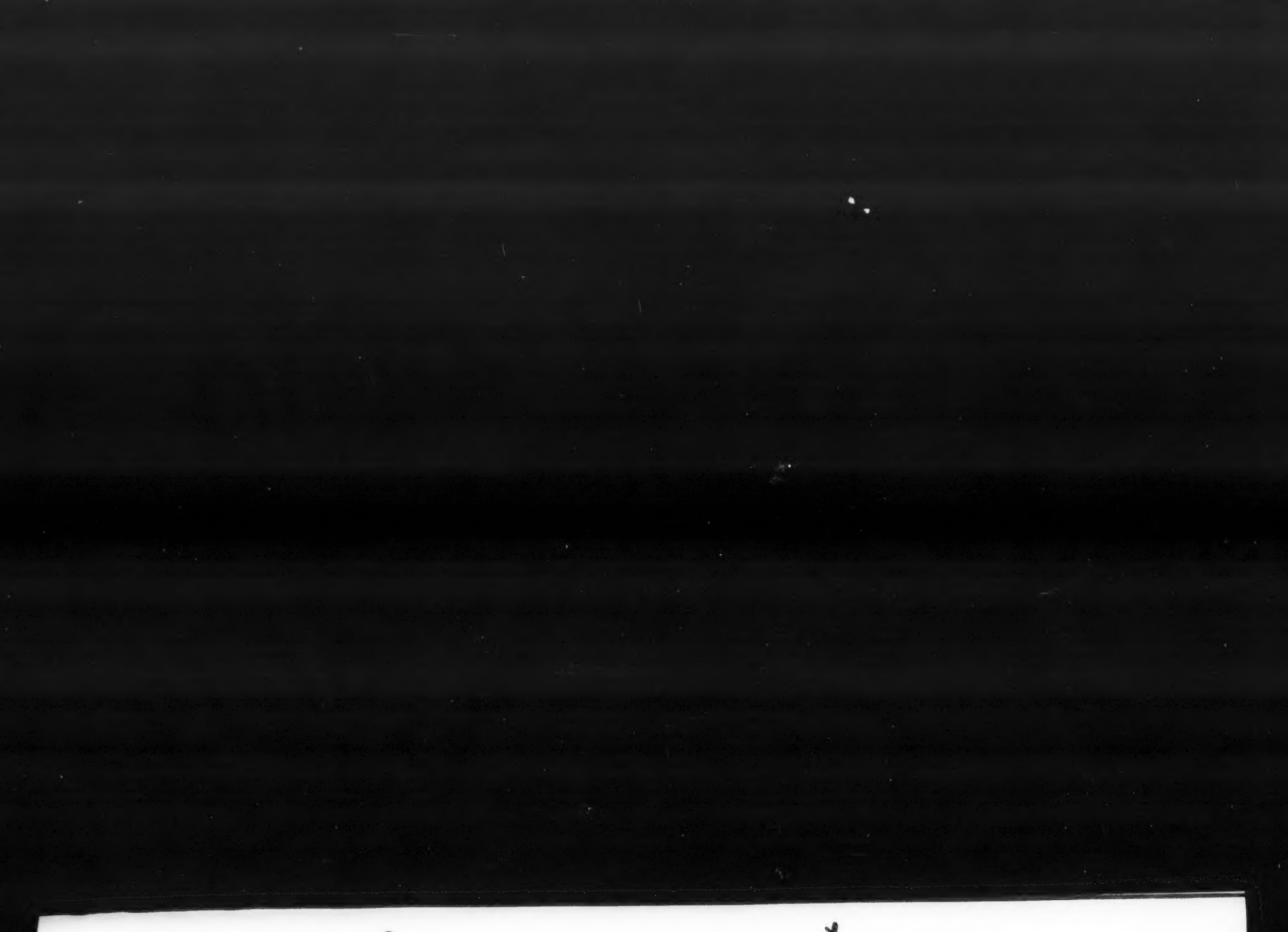
We're anxious to help you. Call or write Franklin Baker, Hoboken, New Jersey, for information.

HEADQUARTERS FOR COCONUT, FRANKLIN BAKER DIVISION, GENERAL FOODS CORP., HOBOKEN, N. J.

A type of coconut for every confectionery need. Complete line includes the following famous brands:

Gem Philippine Coconut *(10 varieties)* **Golden Toasted Coconut** *(4 varieties)*

Tender-Fresh Coconut *(4 varieties)* **Baker's Creamed Coconut** *(2 varieties)*



CAUGHT... *Between Costs and Competition?*

LAND O'LAKES

Improved

NONFAT DRY MILK SOLIDS SOLVES BOTH PROBLEMS

The squeeze is on between high production costs and stiffer competition for the public's candy-buying dollars. Yet you can meet *both*—and make a good profit—by using LAND O'LAKES New Improved Nonfat Dry Milk Solids. It's economical. The initial cost is low. It requires no refrigeration, and only small storage space. The low moisture content means less cooking, lower fuel bills.

But flavor is what counts with consumers. *Good* flavor—mellow and tempting but not too sweet—is a contribution LAND O'LAKES New Improved Nonfat Dry Milk Solids makes to any formula specifying milk. Try it—and watch your sales climb!

•

CONTINUOUS SUPPLY OF NEW IMPROVED NONFAT DRY MILK AVAILABLE EVERYWHERE—QUICKLY

•

Immediate Delivery Through Branches, Brokers and Jobbers in Principal Cities, or write LAND O' LAKES Creameries, Inc., Minneapolis 13, Minnesota

LAND O' LAKES DRY MILKS

QUALITY *Plus* FOR *Every* USE

The Master's Touch

CONCENTRATED CITRUS OILS
Our concentrated citrus oils keep fresh longer and more than match the taste of untreated oils.

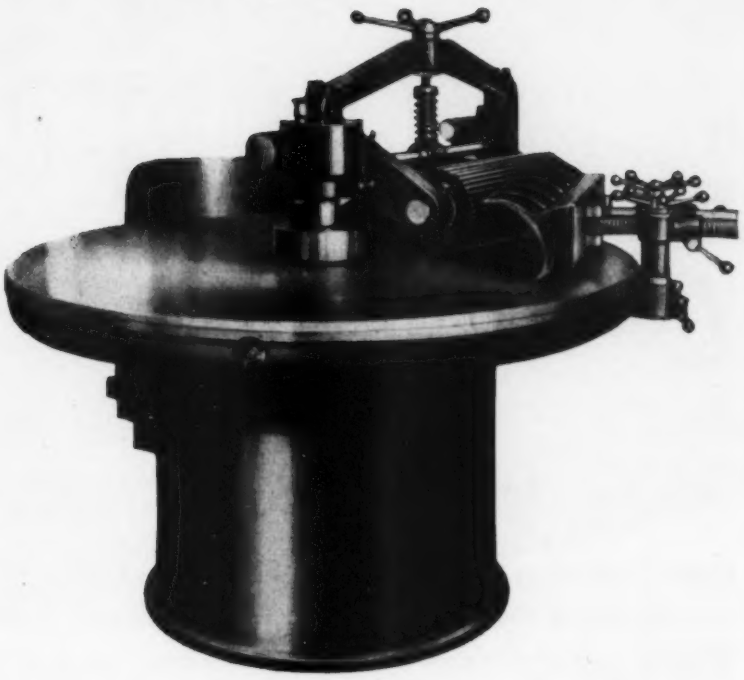
IMITATION FLAVORS
No hard time for the Hard Candy manufacturer. Our imitation flavors defy the real thing in taste and beat everything in quality and economy.

FLAVORS WITH OTHER NATURAL FLAVORS
When science and nature get together in creating a flavor, then you've really got something. Our Raspberry, our Strawberry, our Cherry and many of our other flavors for cream centers make unsurpassable quality creams.

THE skill and knowledge required in carving a sailing ship has its counterpart in producing fine candy flavors. Both require long years of experience and a creative talent. Over a half-century ago, FRUTAL FLAVORS "shipped out" into the realm of hit-or-miss flavors with their compass set on an ideal . . . the production of finer, fresher flavors made up to new high standards. That we have "arrived" is evident by our leadership over these many years. If you like to improve the flavor of your candy, why not set your sails to the port of profits by utilizing the experience, know-how and the "MASTER'S TOUCH" that we can place at your command. We'll gladly send you samples. Write us today!

POLAK'S *Frutal* WORKS, INC.

MIDDLETOWN, NEW YORK

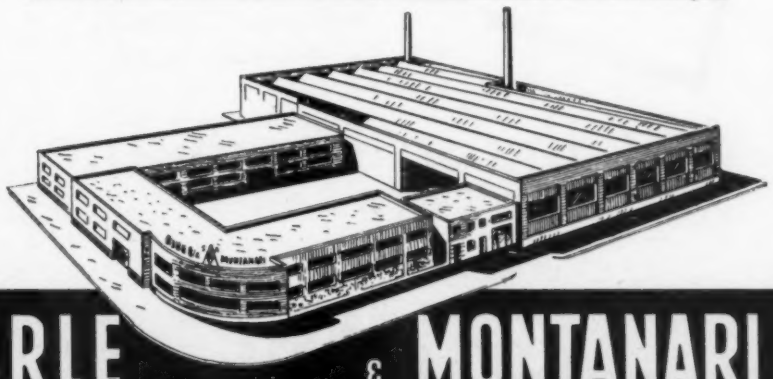


BATCH KNEADING MACHINE

model "IZ"

Water cooled rotating table and kneading Roller Adjustable Roller and Plough Blades ensures air bubbles total elimination. Fool proof, extremely simple, easy to control speedy operation. Candy batch capacity from 20 to 120 lbs.

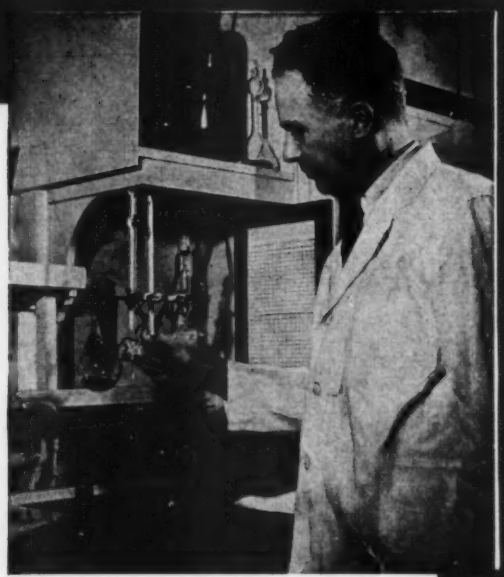
Early Delivery Assured



S.A. CARLE & MONTANARI MILANO - ITALY

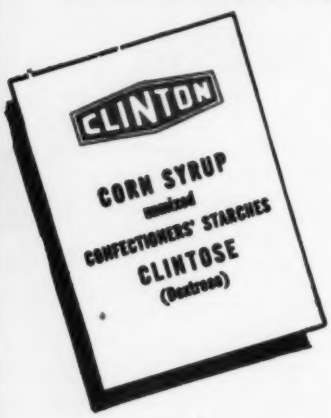
NEW YORK Office: 6 West 77th Street, SChuyler 4-1305

Guaranteed QUALITY



When you use Clinton's SYRUPS and STARCHES

Clinton's laboratory tested syrups and starches are scientifically manufactured to insure you unvarying uniformity. Clinton's staff of highly trained technicians are constantly checking these products to assure top quality, batch after batch.



● *Our Sales Service Department is for your convenience. You'll find it mighty helpful and profitable in solving your technical problems. Write or call without obligation.*

Tops

FOR CONFECTIONERS
COAST-TO-COAST

Clinton Foods Inc.

CLINTON, IOWA

CLINTON

when they're made with

Velvet FRUITS & FLAVORS DICED MIXED FRUITS

CHECK THIS LIST
for your requirements

- **PINEAPPLE** (core removed)
- **GLACÉ CHERRIES**
- **LEMON PEEL**
- **ORANGE PEEL**
- **CITRON**
- **MIXED FRUITS AND PEELS**

ORDER NOW FROM PITT

. . . because these fruits are slo-o-owly and carefully processed for the full length of time with a "just right" sugar content. This uniformity in sugar content assures stability of the fruit when mixed with the fondant . . . prevents unwanted cordialization.

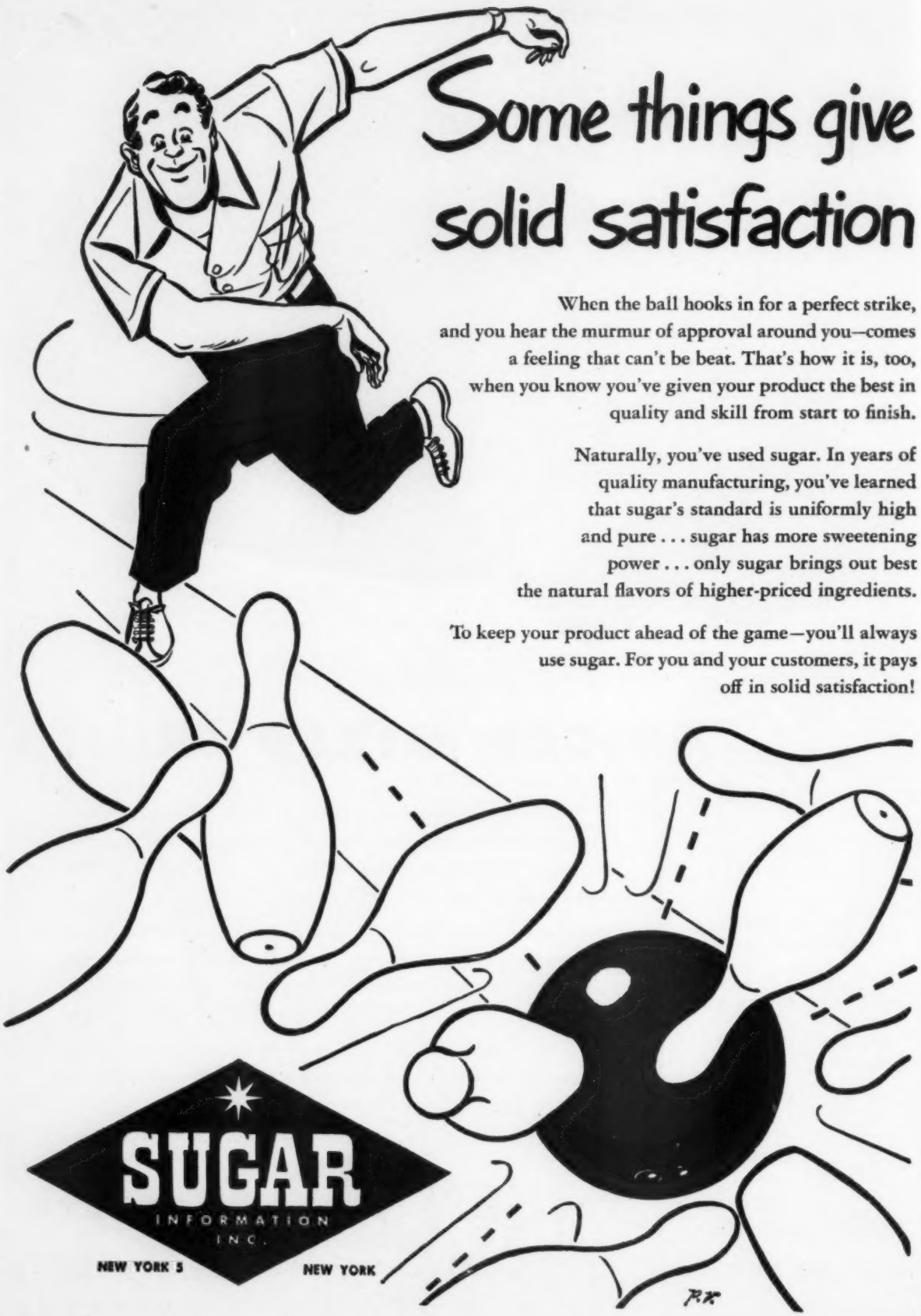
When you buy Velvet brand, you know you're getting all fruit and no substitutes. And Velvet fruits are tender . . . bright . . . and clear; fully processed so they can't turn sour. Best of all, they *stay fresher longer* inside the egg. Each fruit has its characteristic bright color and flavor.

With Easter coming early in 1951, it's time now to order your supply of fruit. Get the best in fruits—get Velvet brand. Write direct to our home office or call in your Pitt man.

THE C. M. PITT & SONS CO.
Since 1910

Key Highway & Boyle St. **Baltimore 30, Maryland**

FRUITS • FLAVORS • EXTRACTS



Some things give solid satisfaction

When the ball hooks in for a perfect strike, and you hear the murmur of approval around you—comes a feeling that can't be beat. That's how it is, too, when you know you've given your product the best in quality and skill from start to finish.

Naturally, you've used sugar. In years of quality manufacturing, you've learned that sugar's standard is uniformly high and pure . . . sugar has more sweetening power . . . only sugar brings out best the natural flavors of higher-priced ingredients.

To keep your product ahead of the game—you'll always use sugar. For you and your customers, it pays off in solid satisfaction!

SUGAR
INFORMATION
INC.
NEW YORK 5 NEW YORK

YOU CAN'T FOOL A PROSPECTOR WITH "FOOL'S GOLD"!

Substitutes for QUALITY will never make better confections

Warfield

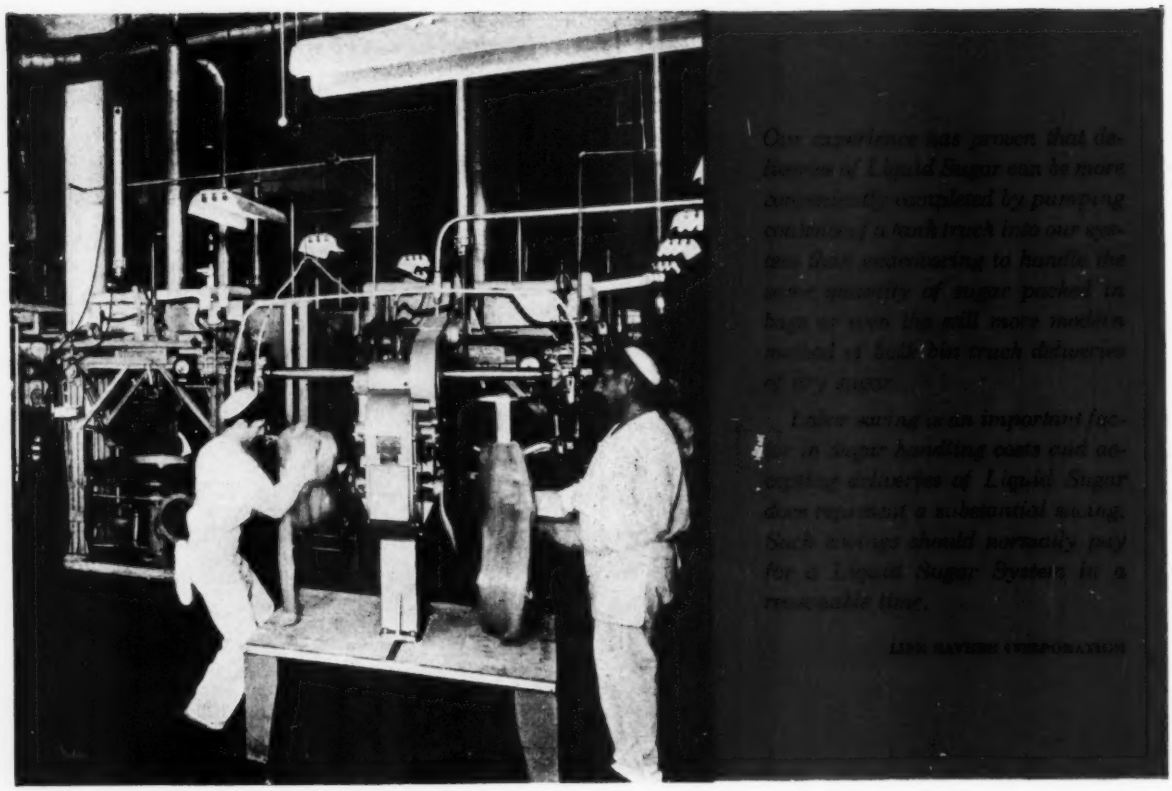
Chocolate and Candy Bon Bon

COATINGS

and Pure EXTRACTS

Write for Samples

THE WARFIELD COMPANY
536 W. CERMAK ROAD, CHICAGO 16, ILLINOIS
"In the heart of the Candy Industry"



CANDY MANUFACTURERS WHO USE *FLO-SWEET*® SAVE $,$$$ EVERY YEAR

Users' experiences prove that such important savings are typical whenever liquid sugar replaces dry sugar. The fact that three easy mechanical operations do the work of 10 back-breaking storage and handling operations is one quick indication of how Flo-Sweet cuts costs.

Users' experiences prove, too, that there's no substitute for—nothing "just as good" as Flo-Sweet experience, Flo-Sweet "know-how," Flo-Sweet service.

THESE ARE FACTS:

- Flo-Sweet made the first liquid sugar for bulk distribution 27 years ago.
- Flo-Sweet engineered and supervised 90% of the liquid sugar installations in the areas it serves.
- Flo-Sweet has the sugar industry's outstanding Research Laboratory.
- Flo-Sweet serves you with the largest fleet of tank-trucks, tank-cars and tank-ships handling liquid sugar today.
- Flo-Sweet is the only liquid sugar supplier in the East maintaining storage facilities away from the refinery for customer service.

Therefore, when you get Flo-Sweet you get *more* plant assistance, product research and improvement, product control, and always-dependable service . . . *AND THOSE ARE THE THINGS THAT SAVE YOU $,$$$ EVERY YEAR*

flo-sweet

Manufactured only by

REFINED SYRUPS & SUGARS, INC.

Yonkers, New York

PIONEERS IN LIQUID SUGAR FOR SAVINGS, SANITATION AND SERVICE

The Manufacturing Confectioner

DECEMBER, 1950, Vol. XXX No. 12

CHOCOLATE and the COCOA BEAN

by NORMAN W. KEMPF

Director of Research
Walter Baker Chocolate and Cocoa Division
General Foods Corporation

Mr. Kempf gave this talk before the Chicago chapter of the A.A.C.T. in November.

THE TASTE sensation which we know as chocolate flavor is caused by a very complex mixture of components. There is no chemical compound which predominates in determining the flavor as is the case, for example with Wintergreen, where methyl salicylate is responsible for the greater part of the taste sensation observed. Much work has been done throughout the years in attempts to identify the components responsible for chocolate flavor and some have been isolated and identified but on the whole we are still in the dark regarding the composition of all of the components. A remarkable thing about chocolate flavor is that it does not exist as such in the cocoa bean which is the raw material used in making chocolate. The flavor appears during the roasting and processing of the beans in the chocolate manufacturer's plant and its development continues after the chocolate manufacturer has completed his work and the product ages before use. At first blush it would appear that everything depends on the method of roasting and processing in the chocolate plant. However, in order for this phenomenon to happen, there must be present in the cocoa beans substances which chemists call precursors, which are altered during the roasting and processing to create the components of chocolate flavor.

Factors Affecting Precursors

It is the purpose of this talk to review some of the factors which affect the presence or absence of these precursors and therefore play an important part in the final creation of chocolate flavor.

To understand some of the things which have happened in the tropical areas of the world where cocoa beans are grown, we must go back to the beginning which, as far as the western civilization is concerned, occurred when Columbus first arrived in this hemisphere. He found that the natives were using the seed of the cocoa tree as a luxury food which was so highly prized that the beans were used as a medium of exchange in place of money. He was responsible for introducing chocolate to Europe as he took some of the beans back with him on his return voyage. There are no records to show that the Mayas or Incas cultivated the cocoa tree. It probably grew wild. However, when the Spanish missionaries arrived on this continent they recorded having set out plantations or orchards and cocoa cultivation began in Central America.

When any plant is cultivated or grown in close proximity with others of the same type, it is far more prone to epidemics of plant diseases than is the case when single individuals are growing in the forest. The plant diseases of the cocoa tree have become in recent years a very serious problem and will have an important effect on the flavor of the future growths of cocoa as I will explain later.

As the interest in cocoa grew, cultivation was started in other lands conquered by the Spaniards. When they arrived in Ecuador they found cocoa growing wild in that country but it was a different kind than that which they had found in Central America. Similarly when the Portuguese settled in Brazil they found cocoa growing wild in the Amazon basin but it was different again from the two mentioned above. When cocoa cultivation was introduced into Africa, the Brazilian cocoa was selected as the seed to start the new plantations because it gave a greater yield per acre than did the cocoa found in Central America and North and South America. As a result of this historical development, we find three major

types of cocoa under cultivation throughout the world and there are many hybrids or crossbreeds resulting from planting different varieties in close proximity.

The flavor of finished chocolate is very largely influenced by the botanical variety of the tree on which the cocoa is grown so that skill in blending the various varieties is one of the stocks in trade of the chocolate manufacturer.

Maturity of the Pod Influences Flavor

In addition to botanical variety, a second factor which influences chocolate flavor is the maturity of the pod when it is harvested. Some of you may have, during your youth, experimented with green apples. If you have, you know that they are not only tart, astringent and sour to the taste but also have unpredictable effects on the human digestion. All of us have had experience with honey-dew melons. If they are ripe there is nothing more delicious. If they are not ripe, they are best left alone. The same principle applies to cocoa beans. If the pod is harvested before it is fully matured, the resulting beans will have an astringent, unpleasant flavor and a slaty, unattractive color. Furthermore, the pulp surrounding these beans will not have sufficient sugar to carry out the fermentation which is so necessary as a step in the preparation of the beans for market. Unfortunately, the problem of harvesting ripe pods is not a simple one, especially where cross pollination of different varieties has resulted in a hybrid population of the cocoa trees.

Color of the pods is not a reliable indication of their maturity. Down in the Dominican Republic, the growers claim they know how to pick mature pods. They rap the pod with a stick. If it gives a "clunk" it is mature, if it gives a "clink" it is still unripe, but if it gives a "clank" it is overripe, but it is packed anyway. This may be very useful if the pods are within easy reach at the trunk of the tree but is unreliable if they are growing on a branch 18 or 20 feet up in the air. The selection of mature pods is still a major problem which has not been solved.

When the pods have been harvested, they are gathered together to be opened, and the beans are scraped out. The beans are imbedded in a heavy coating of meaty pulp containing sugar, fruit acids and gums. Its flavor, when fresh, somewhat resembles that of a honey dew melon. To the rather primitive cocoa grower however, it was a nuisance, as it prevented drying of the beans so that they could be roasted and used. Many years ago it was discovered that this nuisance could be abated by just leaving the mass of beans and pulp alone for a few days. Fermentation immediately occurs, and the yeasts and bacteria ever present in the tropics consume the sugars in the pulp, converting them to alcohol and then to acetic acid, whereupon the pulp is liquidated and the beans emerge in proper condition for drying. Coincidentally, this fermentation has also a profound effect on the flavor and color of the beans. Sufficient heat is generated by the action, to kill the germ of the bean, and the moment the living organism dies, changes take place. Nature provided a plentiful supply of enzymes in the bean to assist the tiny growing plant to convert the stored materials into products which the plant could consume and utilize. On the death of the germ, these enzymes are released, and instead of being directed by a living organism, carry out their action in accordance with the temperature and oxidative conditions prevailing at the time. Because various enzymes function best at certain optimum temperatures, the actual temperature of the fermenting mass determines which enzymes are most active. Other enzymes require oxygen in order to function, it is found in abundance only on the surface of the mass, so the size of the mass and the rate of turnover or exposed fresh surface are also significant factors in determining the end result.

Many of the flavor defects found in commercial cocoa beans are the result of improper fermentation. Completely unfermented beans are purple in color and astringent in flavor, when roasted, they do not develop desirable chocolate flavor. Therefore, fermentation is a necessary step in preparing raw cocoa so that it will develop chocolate flavor when it is roasted and processed. It also affects the next important step which is the drying operation. If properly fermented, the bean will dry quickly but if gum is left in the pores of the shell as a result of incomplete fermentation, it will interfere with release of moisture from the kernel and there is danger of internal mould growth as well as too long continued enzyme action. Consequently, complete and quick drying in the tropics is an important step in providing the correct precursors for the development of flavor.

In recent years, diseases of the cocoa trees have become important indirect factors in affecting these flavor precursors. Some of these diseases have had disastrous effects on production. Surninam was formerly a substantial producer of cocoa. About 30 years ago a fungus disease called "Witches Broom" ran wild in Surninam and now there is no commercial production in that country. This same disease is making serious inroads into production in Trinidad, Ecuador and Eastern Venezuela. Agricultural workers are busy trying to find new Botanical varieties which are immune to this disease so that plantations may be restored. These varieties may and frequently do have flavor precursors differing from those in the standard growth characteristic of the area. Hence there is an indirect effect on flavor caused by the war against disease. Other diseases have affected production. Pod rot diseases attack and ruin as much as 40% of the crop in Panama and Costa Rica. In Africa, the virus disease known as "Swollen Shoot" has killed millions of trees, but has not yet affected flavor seriously, as disease resistant varieties have not yet been found.

To sum up, the selection of proper varieties, the harvesting of mature fruit, proper tropical fermentation and drying, all play an important part in placing in the cocoa bean the precursors whose presence is essential during the roasting and processing of cocoa beans to develop chocolate flavor.

In 1947, I had an opportunity to visit cocoa plantations in Panama and Costa Rica in connection with an inspection trip to the Research Station which General Foods Corporation maintained at Almirante Panama to study fermentation. Amateur movies taken on this trip by me and some of my associates give an idea of the problems involved in obtaining the kind of cocoa processing in the tropics which a candy technologist might consider desirable. The pictures also include scenes showing the fight against diseases of the cocoa tree and methods of propogating trees used in an effort to obtain better yielding and disease resistant varieties.

The Inter American Institute of Agricultural Sciences at Turrialba, Costa Rica, sponsored by the Pan American Union is training men from all of the cocoa growing nations in the hemisphere in the cultivation and processing of cocoa. The Cocoa Research Institute of the U. S. is helping to support this work by sponsoring fellowships in the college. In due time, the tropical processing of cocoa beans will be improved as a result of the educational work done at Turrialba. The Institute is fortunate in having as Chief of its Cocoa Section, Mr. George Bowman, one of the world's greatest experts on cocoa culture.

Design considerations for candy cooling tunnels

by **J. E. SALMON**
Carrier Corporation

PART II

Tunnel Design

All of the foregoing discussion covering the nature of the cooling tunnel load together with the factors affecting the heat transfer, are basic to the actual design of a cooling tunnel for any specific use. In addition to this, the foregoing discussions will in many cases give some indication of methods or means by which existing cooling tunnel equipment can be improved to give higher rates of production, better production or more economical production. As an example, it may be possible to increase air quantities, obtain counter flow, improve insulation, etc., as discussed, in order to obtain better operation. In designing a new tunnel, the foregoing by itself is not sufficient to create a design with the definite assurance that the design objective will be met. The reason for this revolves around the fact that it is virtually impossible to predict whether or not the material being cooled will give up its heat at the desired rate under the proposed design conditions. The design is predicted on removing a quantity of heat from the product which can be accurately determined. Also the operating losses such as transmission losses, belt cooling, power usage and infiltration can be calculated with a very good degree of accuracy. However, the element of time is overlooked in all of these calculations. The physical nature of any product may prevent its giving up the design quantity of heat within the desired time. The best guide in this regard is past experience in handling the same or very similar products. If such experience is lacking, then it is wise to set up a test procedure in order to attempt to determine the rate at which the product will give up its heat under conditions at or as near the design conditions as possible. This can often be done in a somewhat crude manner which even though rough may give sufficient assurance to justify completion of the design of a new tunnel.

An example of this occurred some years ago when the question of ultra-rapid cooling of a specific product was taken under consideration. Previously the product had been stored in low temperature rooms for a considerable period of time after forming into slabs. On such a production schedule no difficulty was encountered in the reduction of the product temperature. However, in a plant modernization program, it appeared that it would be extremely advantageous if the product could be cooled in a continuous sheet by passing it through a cooling tunnel in a matter of a few minutes time. This was a completely unknown quantity, therefore a test program was inaugurated. In this experiment, a section of duct work, of approximately the cross-sectional dimensions of the proposed cooling tunnel, was connected to an existing air conditioning system. In the duct was introduced a section of canvas belting which was proposed to be used in the finished tunnel. An access door arranged for quick opening and closing was provided for the introduction of samples of the product for test purposes. A small laboratory oven was used to preheat the product to the temperature at which it would come to the cooling tunnel. Test samples of the product were then introduced into the air stream in the section of duct work simulating the tunnel, and its temperature measured after specific intervals of time. With the air temperature and velocity known, it was then possible to plot a curve for the time temperature relationship on the product with varying air velocities over the material. From this somewhat crude test work, sufficient data was obtained to warrant the design and installation of the cooling tunnel. In this case the completed tunnel proved successful and confirmed the results predicted in the experiment. Similar test set ups can be made for virtually any product. If air conditioning systems are unavailable, it may be possible to conduct test work during the winter months when cold air can be drawn from the outside in regulated quantities.

In designing a new tunnel the primary considerations are those of cross-sectional dimensions and length. The width of the tunnel is normally established by the method of handling the product through the tunnel. It is obviously an advantage to keep the width as narrow as possible so that the cooling air will then be concentrated over the product. If the product is handled on a belt then the interior of the tunnel can normally be worked out to be something like 2 to 4" wider than the belt. The height however, cannot be established until the air quantity to be handled is known. This air quantity is derived from first calculating the total heat load expressed in BTU/hr which must be handled. This load is made up of the product cooling, belt cooling, power usage, transmission losses and either infiltration or outside air losses. The total of this expressed in BTU/hr used in the following formula will then provide the answer in cubic feet of air per minute which will be required:

$$CFM = \frac{BTU/HR}{1.08(t_o - t_i)}$$

where:

CFM is cubic feet per minute of air
BTU/HR is the total heat load
t_o is the temperature of the air leaving the tunnel
t_i is the temperature of the air entering the tunnel
1.08 is a factor recognizing weight per cubic feet and specific heat of the air

In using this formula, however, it is noted that the temperature differential between air entering and leaving the tunnel must be known. This is not always the case but based on experience, temperature rises in the nature of 20° have proven to be effective and for a preliminary calculation can be used in order to establish tunnel dimensions. With the air quantity known, the cross-sectional

Part I of this article by Mr. Salmon, written exclusively for The MANUFACTURING CONFECTIONER, *was published in the November issue.*

area of the tunnel can then be obtained by use of the formula

$$A = \frac{CFM}{V}$$

where:

A is area in square feet
CFM is cubic feet per minute of air
V is velocity of the air in feet per minute

From the previous discussion, this velocity should be in the neighborhood of 1000 to 2000 feet per minute so for a preliminary design, it is advisable to use the median or 1500 feet per minute, as the basic design velocity. Knowing the cross-sectional area of the tunnel and the width as already determined, it is then a simple calculation to obtain the height to establish the overall cross-sectional dimensions.

The length of the cooling tunnel presents a number of problems, both from the standpoint of space available and desirable amount of cooling to be accomplished. Normally the speed of the belt or other product moving mechanism is fixed by other manufacturing operations such as the enrober speeds, depositor speeds, etc. If the cooling time is known or can be established by test work then the length of the cooling tunnel can be determined merely by taking the distance that an increment of the belt or the moving mechanism will cover in the time required for cooling. As an example, if a test on some product shows that it can be cooled under some condition of air velocity and temperature differential in a period of 5 minutes and the belt speed to be used is 12 feet per minute, then the tunnel would have to be 60 feet long if the product passed straight through. Or there would have to be a total product path of 60 feet within the tunnel if it was necessary, due to space limitations, to have the product make more than one pass through the tunnel. If the length of the tunnel as determined requires more space than is available, then further investigation must be made of the other factors affecting the rate of heat transfer such as increased M.E.D., more exposed surface of the product, higher air velocities, etc.

When cooling tunnels are used in conjunction with an enrober for setting chocolate coatings, a variation of the standard single pass counter flow tunnel has been used with good success. In this case, the tunnel is either divided horizontally by an uninsulated metal partition or better yet is provided with a steel belt which effectively forms a horizontal baffle dividing the cooling tunnel into an upper and lower chamber. The cold air is supplied to the lower chamber at the product entering end of the tunnel and progresses through this lower chamber to the opposite end of the tunnel. At this point it is transferred to the upper chamber and returns to the product entering end so that the air moves counter to the flow of product. The important feature of this tunnel is the fact that by introducing the coldest air to the lower chamber, the return belt is considerably cooled. It therefore, tends to act in the nature of a bottomer slab to provide quick setting of the bottoms. In addition to this, since the lower chamber is always colder than the upper chamber, heat transfer will take place through either the steel belt or the sheet metal partition to further assist in his bottoming operation. In this manner, the air supplied to the tunnel has already picked up a portion of the heat load on the tunnel by the time it actually comes in contact with the product. By so doing, the chocolate is effectively cooled at a slower rate which promotes better gloss and condition of the coating while at the same time the total production rate of the entire tunnel is maintained at a high level. A commercial design of a tunnel built on this principle is currently available.

The actual materials used in the construction of the tunnel proper are not critical, however, some insulation should be used. Probably in most cases where tunnels pass through conditioned spaces and the maximum temperature differential between the interior and the exterior of the tunnel is in the neighborhood of 25°, insulation equivalent to a 1″ thickness of vegetable cork can be economically justified. If the temperature differential is in the neighborhood of 40 to 50°, then probably the insulating material should be at least equivalent to a 2″ thickness of vegetable cork. For sanitary reasons, both the interior and exterior of the insulation should be covered with a metal jacket which ideally would be of stainless steel, baked enamel or some other non-corrosive material. Sufficient access panels must be provided along the length of the tunnel for inspection and cleaning purposes as well as access for maintenance to the various bearings, sprockets, etc., involved in transporting the product.

Care must be exercised in the design of the entrance and exits to the tunnel in order to limit these openings as much as possible and reduce the possibility of air infiltration or leakage. The method ordinarily used is to provide a flexible canvas or rubber curtain. This curtain is so designed that the clearance between the product and the curtain is held to an absolute minimum. Another arrangement which has been successfully used makes use of entrance and exit vestibules. These vestibules are provided with a minimum of three fixed baffles which are designed to come as close to the product as practically possible. These baffles act to create a series of expanding chambers for any air passing through them. This creates a very considerable frictional resistance to air flow and in this manner minimizes the leakage at the entrance and exits.

The preferred air cooling equipment for cooling tunnels consists of finned cooling coils and centrifugal type fans. The cooling coils may be used in connection with chilled water, brine or direct expansion refrigerant depending upon the refrigeration system in use for the entire plant. While it is possible to specially design the fan and coil equipment, it generally is more satisfactory and usually is lower in cost to utilize standard fan coil units known as cold diffusers. These are standard products of manufacturers in the air conditioning and refrigeration industry. Such a unit is illustrated in Figure 3. This unit consists of a fan section with multi-blade

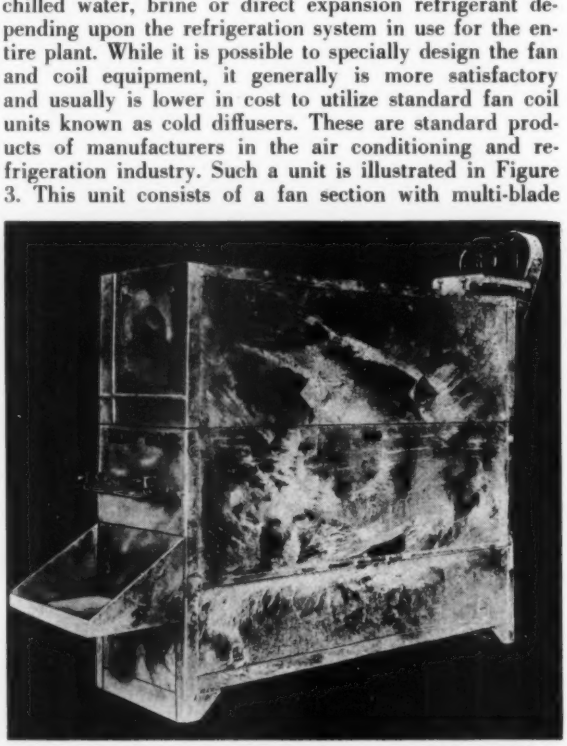


FIG. 3: Cold diffuser unit suitable for use on cooling tunnels.

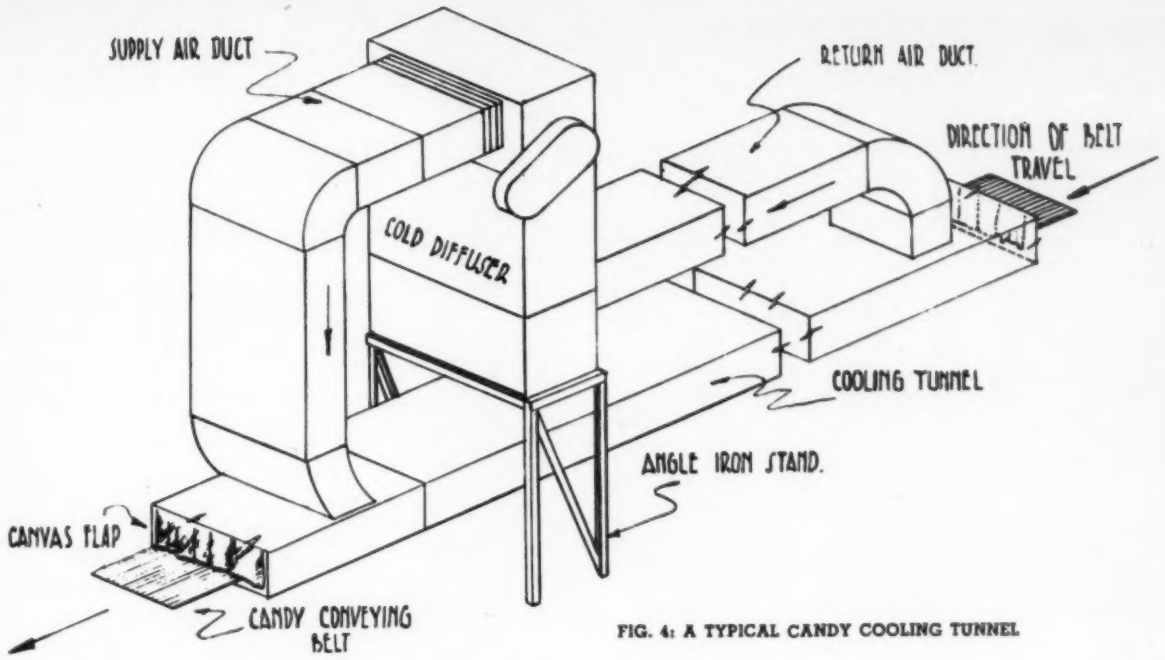


FIG. 4: A TYPICAL CANDY COOLING TUNNEL

centrifugal type fans, adjustable speed V-belt drive, belt guard, electric motor, coil section with finned type cooling coils and a base section with drip pan. The unit can be mounted on the floor beside the cooling tunnel or on a platform above the tunnel. Suitable duct connections are required for conveying the supply and return air to and from the tunnel. A typical application is illustrated in Figure 4.

In northern climates where relatively low temperature conditions prevail for a fairly considerable portion of the year, it is possible to make use of cold outside air rather than mechanical refrigeration for much of the cooling tunnel operation. To accomplish this, it is necessary to provide an outside air intake complete with controls and dampers in order to take advantage of the low outside conditions whenever possible. When this is done, however, it is necessary to include filters to remove any dust or any other possible contaminants which may be contained in the outside air. With such an intake, control is obtained by means of two thermostats; one located in the outside air and the second in the fan discharge from the cooling unit. These are arranged so that the outside air damper is kept fully closed whenever the outside temperature is above the temperature of the return air coming back to the cooling unit. As the outside air temperature falls below the return air temperature, control is transferred to the discharge thermostat which then modulates the outside and return air dampers so that a sufficient quantity of outside air is taken to maintain the desired supply air temperature. Obviously some mechanical refrigeration will still be needed until such times as the outside air temperature falls below the desired supply air temperature.

When outside air is used, it is necessary to provide a relief from the tunnel equipped with a back draft damper so that the excess air can be relieved readily. This damper can discharge the relief air either into the rooms in which the tunnel is located or may be taken by means of a duct to the outside. By so doing, a minimum amount of mechanical refrigeration is required with a resultant reduction in operation costs. This control is shown diagrammatically in Figure 5. However, if the cooling tunnel refrigeration represents only a minor part of the complete plant refrigeration requirements, most manufacturers prefer not to use an outside air intake for the tunnel systems. The reason for this is that the controls and maintenance of the controls, together with the maintenance of the necessary filters, probably outweighs

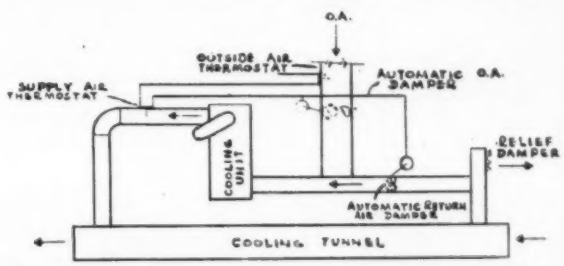


FIG. 5: Schematic control diagram for a cooling tunnel using outside air.

the operating cost in providing mechanical refrigeration from a large central plant on a year-round basis.

The control of the air supply temperature to the cooling tunnel is dependent primarily on the method of refrigeration employed; that is, either direct expansion or brine. Where a direct expansion is used, a back pressure regulating valve is incorporated in the refrigerant suction line coming from the evaporator coil. This valve acts to maintain a constant refrigerant temperature within the coil which in turn fixes the coil temperature and tends to fix the leaving chilled air temperature. A refinement on this control can be obtained through the use of a thermostatically controlled back pressure regulating valve with the temperature sensitive element of the thermostat located in the supply air. Under either of these arrangements, the compressor may be allowed to operate on suction pressure control. However, a further refinement can be obtained if the compressor is equipped with a built in capacity control device. This will tend to limit the cycling of the compressor under light loading

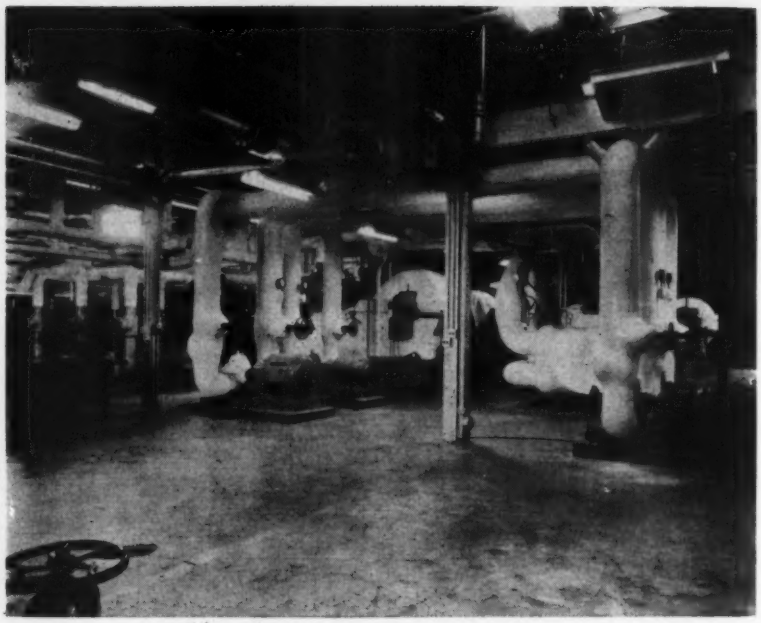


FIG. 7: Installation of centrifugal refrigeration machines for centrally chilling brine for use throughout a large modern candy plant. (Mars, Incorporated)

conditions and will give much smoother and better operation.

Where brine or chilled water is used as a source of refrigeration, a simple control consists merely of a thermostat in the supply air controlling a valve which regulates the flow of brine or chilled water through the cooling coil. A somewhat better method is to use a 3-way valve instead of a simple modulating valve since this will throttle the amount of brine going through the cooling coil but will not affect or upset the balance of the brine circulating throughout the piping network.

For the small candy plant, refrigeration requirements for cooling tunnels, etc., are probably best served by using direct expansion of Freon refrigerant. Many modern design high efficiency Freon compressors are currently available (Figure 6) and the general practice calls for the furnishing of one compressor for each cooling tunnel or similar application throughout the plant. It is advisable to keep the compressors located as closely as possible to the evaporating coils for best operating efficiency. Since Freon is classed as a completely safe refrigerant, there is no objection to locating the compressors in working areas in the plant proper. This is not true for ammonia since it is both toxic and explosive and therefore, its use in the manufacturing spaces where there may be a large number of people involved, is not to be tolerated.

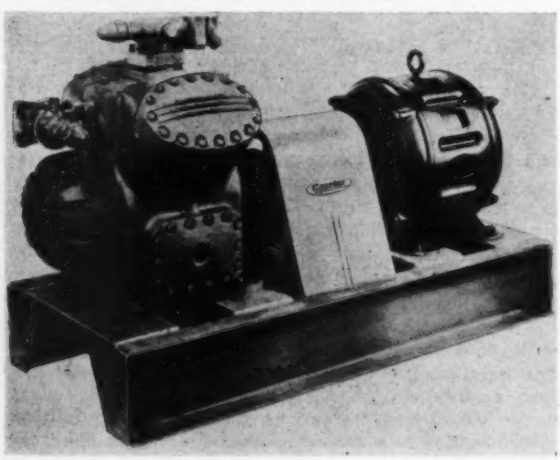


FIG. 6: High speed direct connected reciprocating compressor of the type suitable for use on direct expansion applications.

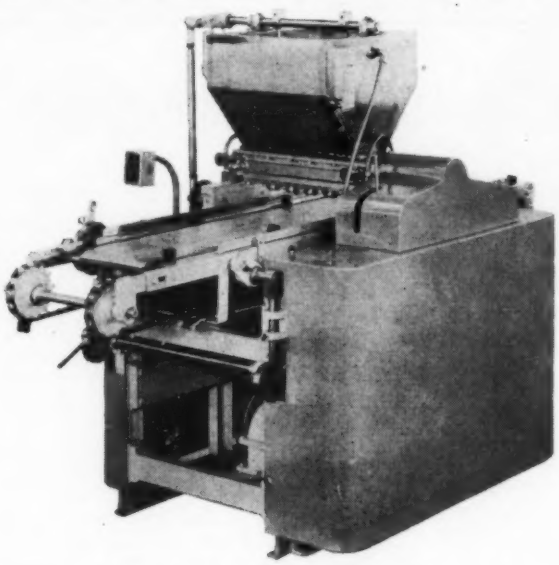
Central Refrigeration Plant Desirable

In the larger type plants where there may be a considerable need for refrigeration in addition to the cooling tunnels such as cold slabs, packing room air conditioning, storage facilities, etc., the use of a multiplicity of small compressors for each application results in a difficult operational and maintenance problem for the operating engineer. In addition to this, each small compressor must be sized for the maximum load requirement on its evaporating equipment and therefore no advantage can be taken of load factor or reduced operating conditions in any section of the plant. To overcome this in the large plants, it has been found most satisfactory to install a central refrigeration plant usually chilling brine which is then circulated throughout the plant for the various cooling requirements. This large plant can be located in the Engine Room where it is directly under the supervision and control of the operating engineer. Where the Engine Room is isolated from the plant proper, ammonia refrigerant is then satisfactory. However, if the total load requirement is large enough, better operation and longer service life can be experienced through the use of centrifugal refrigeration equipment. (Figure 7). This equipment makes use of Carrene No. 2 as the refrigerant which again is completely safe. This equipment functions to chill brine which is then circulated throughout the plant. This brine obviously must be low enough in temperature to handle the lowest temperature use needed. This means that the brine will be lower than is necessary for some of the applications. While this is basically somewhat inefficient, the overall efficiency of the large central plant, together with its lower operation and maintenance costs, is normally sufficient to overcome the slight disadvantage of having to produce all of the refrigeration capacity at a somewhat lower temperature level than is necessary for some portion of the operation. In actual experience, many confectioners in using a central refrigeration plant find that virtually all of their work can be handled at brine temperatures in the order of 25 to 28°. Where there are special low temperature storage

THE RACINE DEPOSITOR

FOR DEPOSITING OF ANY KIND - SIZE OR SHAPE

The Famous Racine Depositor



Two Sizes— Senior 32" and Junior 16"

Both Models equipped with electric motors and variable speed controls, permitting nominal or maximum production as desired.

THIS RACINE DEPOSITOR IS PERFECT FOR BARS AND CAKES, CHOCOLATES, OR CREAMS, WITH OR WITHOUT CHOPPED NUTS OR FRUITS, ETC., CHOCOLATE STARS, KISSES, WAFERS, NONPAREILS, SMALL OR MIDGET BITS, AS WELL AS MARSHMALLOWS, GUMS, ETC. DEPOSITS CAN BE MADE IN ALL TYPES OF MOLDS, IN PAPER CUPS, OR DIRECT ON TRAYS, PLAQUES, POLISHED STEEL, OR RUBBER BELTS.

1. It handles all sizes, shapes and spacings.
2. It operates without pumps (the only Depositor which does) providing absolute uniformity to size and weight.
3. It is an INVESTMENT for PROFITS, because it saves waste, mess and troublesome operations.

It costs you nothing to get full details and further particulars. INQUIRE TODAY.

Racine Confectioners Machinery Co.

and

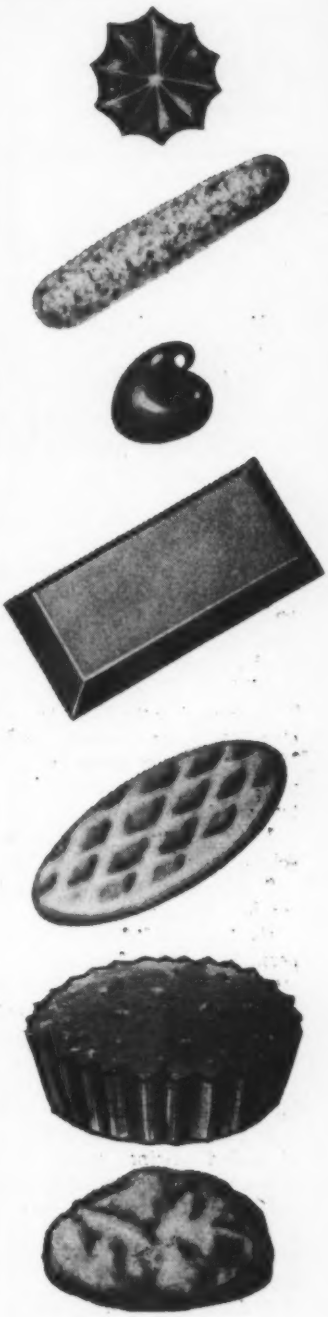
Vacuum Candy Machinery Co.

15 PARK ROW, NEW YORK 7, N. Y.

Western Office and Factory: Racine, Wis.
Eastern Factory: Harrison, N. J.

Canadian Office and Factory: Toronto
Local Offices in Chicago and Boston

SEE THIS AD



INQUIRE *Now*

or other applications, usually a separate refrigerant plant is provided for these.

The use of centrifugal refrigeration equipment often makes possible a very material saving in operating costs since this type of equipment can be driven by a variety of electrical motors, including the synchronous type or may be driven by steam turbines. In the latter case, it is often possible to fit the centrifugal refrigeration machine into the heat balance of the plant since turbines are available for a wide variety of steam conditions. For example, it may be possible to operate the turbine on exhaust steam that might otherwise be wasted from various processes about the plant. It may also be possible to operate the turbine on high pressure steam taken directly from the boilers. This steam might then be exhausted from the turbine at a sufficiently high pressure to serve various cooking or other processing needs. Where this is done, the turbine acts as a reducing valve with the power for driving the refrigeration equipment essentially a by-product of the pressure reducing operation. This type of installation then operates virtually without power costs since it simply makes use of the availability of energy which would otherwise be lost in a straight pressure reduction.

Can we simplify chocolate handling?

MELVYN J. MICKEVICZ, *Research Chemist and Sales Engineer for J. W. Greer Co., gave this talk before the New York chapter of the A.A.C.T. in November.*

THE ultimate goal in handling chocolate is to get the chocolate properly seeded (or tempered) for use in the final stages of the production process. While few people agree on the best system, there is general agreement on this ultimate goal. The final process may be coating centers, solid molding, hollow molding, bottoming, hand-dipping or depositing. Variations in handling techniques are many, but it is known from experience that unless properly seeded chocolate is present at the final process, the chocolate will not solidify in a salable condition.

Recognizing the importance of proper seeding, the next step is to study the basic methods for achieving this end. While operators disagree on available techniques, it is possible to classify most chocolate-handling systems into two general divisions:

1. Chocolate is seeded at an early-handling stage and transported by subsequent steps to final process.

2. Chocolate is handled in the unseeded stage until it reaches final process.

Having established the goal of proper seeding (or tempering), and understanding that there are two basic methods of achieving it, let us consider the advantages and disadvantages of these methods.

Advantages of the first method which we shall refer to as "early seeding," are as follows:

1. Less danger of losing the seeded condition (if coatings are always handled while seeded).

2. There is a factor of convenience in having a source of seeded coatings to supply to bottoming units which lack a positive means of agitation.

Disadvantages of the early-seeding method are:

1. Viscosity control is difficult unless coatings are preseeded in small batches and used promptly in final process.

2. A longer cooling period is necessary to solidify overseeded coatings (as against coatings lightly seeded).

3. Mushy conditions, through an excess of cocoa butter crystals, may cause coater, blower, and shaker to work heavily; may also result in blank spots on sides of pieces.

In considering the alternate basic method, which we shall refer to as "final seeding," the advantages are:

1. Complete viscosity control. While still debatable, it appears that shop life increases when pieces are coated with liquid chocolate containing from three to ten per cent seed.

2. Increased coater production—pieces can be run closer together (coatings not mushy from over seeding).

3. Faster setting of coatings (solidification).

Apparently there is an optimum viscosity level for seeded chocolate beyond which the rate of crystal propergation decreases rapidly. This finding is demonstrated in the experience of some coater operators who disconnect riser scrapers and circulate very cold water to get "better cooling" when coatings become mushy from overseeding. By so doing no "cooling" is accomplished, for a heavy film of chocolate builds up on riser walls and the chocolate is not cooled at all.

4. The human element is minimized. Systems can be developed which are more continuous and foolproof.

5. Less equipment is required (to handle coatings completely unseeded until final process).

Disadvantages of the "final seeding" method are:

1. Loss of seed in the final process—caused by careless operators or faulty equipment.

2. Handling of coatings (in some instances) for maximum receptiveness to seed.

To review, we have grouped chocolate handling techniques under two basic headings: "early seeding" and "final seeding". We have suggested advantages and disadvantages as we evaluated the merit of these two methods. This evaluation, however, is of a general nature.

To be more specific, the operator, interested in determining the particular chocolate handling technique that will give the best results usually raises as a "rule of thumb" the terms of "gloss" and "temper" by which chocolate men judge the final result.

It is in this connection that the candy technologist, with his "thermometer instead of finger" and his "instruments instead of guesses" brings new life to basic problems.

By the application of scientific methods, comparative gloss measurements and comparative temper testing records provide a basis for the opinions we have so far expressed.

From preliminary work, with this form of instrumentation plus scientific studies pertaining to the activity of crystal structures and the operation known as "seeding," it seems reasonable to suggest that a better understanding of the method referred to as "final seeding" leads to means by which we can simplify chocolate handling.

A Digest of

Technical Literature

World-wide developments and research in confectionery and food processing techniques are noted for confectionery manufacturers.

Evaluation of Edible Oils

H. A. Moser, H. J. Dutton, C. D. Evans and J. C. Cowan, Food Technology, Vol. 4, *No.* 3 (1950)—The Northern Regional Research Laboratory describes the development of taste panel methods for the organoleptic testing of soybean oil. As no known chemical or physical test by which detection of off-flavor development in soybean oil exists, special emphasis has been put in refining organoleptic methods.

Sugars in Citrus Juices

R. M. McCready, E. D. Walter and W. D. Maclay, Food Technology, Vol. 4, *No.* 1 (1950)—Sugar analyses by paper chromotography of lemon, orange, and grapefruit juices shows the presence of sucrose, glucose, and fructose, only. Sugars were identified by independent means.

Chemical Residues on Raw Foods

McKay McKinnon, Jr., Food Technology, Vol. 4, *No.* 1 (1950)—The history of tolerances for chemical residues on food raw materials is presented. An explanation of the applicability of the Federal Food, Drug and Cosmetic Act and current data on chronic toxicities of new insecticides are given.

Propylene Glycol in Vanilla Extract

C. F. Bruening, Jour. Assn. Off. Agr. Chemists, Vol. 33, *No.* 1 (1950)—An analytical method is proposed when propylene glycol occurs alone or with glycerol in vanilla extracts. The determination of the glycol involves a co-distillation of it with heptane at a relatively low boiling point.

Analysis for Common Sugars

T. H. Whitehead and W. C. Bradbury, Analytical Chemistry, Vol. 22, *No.* 5 (1950)—A systematic scheme of qualitative analysis is presented for mixtures of sucrose, glucose, maltose and lactose. This is applicable to mixtures of sugars and most food products.

Moisture Determination in Organic Substances

C. F. M. Fryd, Food Manufacture, Vol. 25, *Nos.* 7, 8, 9, 10 (1950)—This is a major problem involving consideration of moisture and effect of its removal from product. Oven drying methods are most widely used. Preliminary dilution of product with sand, design and types of ovens and efficiency of desiccants are discussed. Development of moisture meters and application. Effect of relative humidity on moisture content. Method of adding a miscible liquid. Relative humidities at which chemicals show deliquescence. The Karl Fischer method and technique is advised for hard candy as oven drying gives erratic results. The trend in this field is toward semiautomatic or self-recording meters and perhaps, miniature cyclone drying ovens.

"ROLLERFLO"

"ROLLERFLO"—Streamlined 3-Roll Mill
Push Button Hydraulic Pressure Controls.

★

THE MILL OF TOMORROW

- Built to do your job
- Positive Product Control
- Increased Production
- Eliminates the human element in setting mills.
- Separate Controls for Front and Back Rolls.
- No Pumps or Accumulators

Rollerflo offers you all of this and takes the guess out of your grinding job.

Test runs can be made on your products. Call or write for appointment.

DISPERSION
EQUIPMENT SALES CO.
53 W. Jackson Blvd. Chicago 4, Ill.

candy making for the beginner: Lesson II

by ALFRED E. LEIGHTON
Consulting Food Chemist & Candy Technologist

Read instructions carefully—
be sure they are understood before proceeding.

Prepare and assemble the following items before starting—have them ready: Kitchen scale, granulated sugar, corn syrup (Karo Red label brand—a super market item) 8 ounce measure, small scoop or tablespoon, top part of the double boiler and cover, candy thermometer, pitcher or jar (to rest the thermometer in when it is not in use) palette knife or spatula, pastry brush, marble slab or cookie sheet, and the four bars for the same, food colors, flavors, citric acid powder. Grease the surface of the cooling slab or cookie sheet, with a thin film of shortening ("Crisco", "Spry", "Dexo", or any good shortening) by wiping a clean paper towel which has been dipped in the shortening, over the whole area of the slab—do the same thing with the surfaces of the four bars, and arrange the bars in a rectangle form about 9 by 5 inches, on the slab. (Note in factory practice, special tasteless mineral oil is used for slab greasing because it does not become rancid with age.)

Directions:—1. Using the scoop or tablespoon for adjustment, and a paper bag as a container, weigh off one lb. of granulated sugar; pour sugar into the top part of the double boiler.

2. Measure five fluid ounces of tap-water in the graduate or measure and pour over the sugar in the boiler.

3. Weigh off 8 ounces of corn syrup in a suitable container. The weight of the empty container should have been noted first—that is called the tare. Place this on one side—it will be needed later.

4. Commence to heat the sugar and water in the boiler over a gentle flame while stirring with the palette knife until all the sugar crystals are dissolved. *NOTE.* Do not permit the solution to boil until all the crystals are dissolved—because undissolved crystals are hard to dissolve in boiling syrup, and are capable of graining sugar even though corn syrup, or other doctor, is present in the formula. Any crystals of sugar that adhere to the sides of the boiler must be eliminated, either by wiping them down into the syrup with a water-moistened pastry brush, or with a damp piece of clean cloth wrapped around the palette knife.

5. Place cover on boiler for a few minutes (allowing a small orifice for the escape of steam). The steam will condense on the boiler sides and help dissolve adhering crystals.

6. Remove cover and take off any scum which has formed on the surface of the syrup. The method of clearing crystals from the sides of the boiler may have to be repeated several times during the process of dissolving the crystals. It should be done as often as there are accumulations of a few undissolved crystals.

7. As soon as all the sugar crystals are dissolved, add the 8 ounces of corn syrup (previously weighed and put on one side) to the contents of the boiler. Hold the corn syrup container upside down over the boiler, so that the heat and the steam will thin the residue sticking to the sides of the container, and permit good emptying and drainage. *NOTE.* The Karo Red label brand of corn syrup used in this course contains about 10% sugar (sucrose) and a little more water than the regular grade of confectioners' corn syrup. The regular grade cannot be obtained in less than 5 gallon lots and then not through super-markets, hence the use of Karo which can be purchased in convenient sized containers—not excessive for students use. Differences in composition of the corn syrups have been allowed for in the formulas given throughout this course.

8. Increase the flame, allow the mixture to boil briskly, but *do not stir at this stage—it tends to encourage graining.* Watch out for boiling-over of the mixture as it tends to rise in the boiler with the brisk heat that has been applied. That is the reason for the tall form of boiler to give room for boiling up. The flame can be lowered for a few moments during boiling if there is any danger of the mixture going over the top, but restore the heat as soon as the foam subsides and continue boiling briskly. *NOTE. Slow heating increases the amount of invert sugar formed, causes color deterioration, and stickiness: all undesirable.*

9. Fill pitcher or jar with very hot water and dip the candy thermometer into it for a few minutes, to warm it up, so that it will not receive too much of a shock and break when placed in the boiling syrup which is the next step.

10. Place the thermometer in the boiling syrup making sure that the bulb is covered to at least a depth of one inch. Read the thermometer carefully and note the temperature which it registers.

How To Read The Thermometer Properly. Readings should be made with the eye at the same level as the top of the rising thread of mercury in the stem. For those students who are not too familiar with the thermometer —the small divisional markings on the scale represent either increments of one or two degrees Fahrenheit. To determine which it is, note the numbered divisions and count how many scale markings there are between any two consecutive numbers, divide the number of scale markings into the difference between the numbers, and the answer will tell whether the scale division is a one or two degree increment. For example, the scale shows numbers at 240 and 260 degrees, the space between these two numbers represents twenty degrees, but there are 10 subdivisions in the space between the numbers; therefore dividing the ten sub-divisions into the twenty degrees, each subdivision represents two degrees. The mercury thread climbing from one sub-divisional marking to the next above it, will show an increase of two degrees. Half way between any two degree markings, a one degree increase can be judged, and the thermometer read accordingly, with reasonable accuracy. Most candy thermometers have a clip on the back which permits the

This series is designed exclusively for the beginner to better his understanding of the function of ingredients and the "why's" of candy making. The course has been prepared by Alfred Leighton, consulting food chemist and candy technologist.

instrument to be clipped to the edge of the boiler and remain stationary.

11. Wash down sugar crystals as before, if any have formed, read the thermometer again, and as soon as it reaches 305 to 310 degrees Fahrenheit, remove the boiler from the flame.

12. Remove the thermometer from the boiler, and place it in the hot water contained in the pitcher or jar used before for the purpose of minimising shock to, and consequent risk of breaking the thermometer.

13. After the lapse of a few minutes, the mixture will have cooled slightly, and while still liquid add about ¼ to ½ teaspoonful of powdered citric acid, about ½ to 1 teaspoonful of any preferred food flavor, (orange, lemon, lime, or wild cherry etc., and a few drops (count them) of the appropriate color, sufficient to tint the mixture to the desired depth—use orange color for orange flavor, yellow for lemon, green for lime, and cherry red for the wild cherry.) Some food color preparations purchased in the super-market are provided with shaker tops that permit one or two drops to be shaken out at one time—if not so provided, use a medicine dropper to add the desired color dropwise to the mixture. If the assortment of colors does not have the one that is appropriate for your flavor, it can be made by blending as follows:—red and yellow for orange, yellow and blue for green, red and blue for cherry,—a little practice will enable the student to judge how many drops of each color are necessary to make the right tint for the individual flavors.

14. Using the spatula, stir the acid, flavor and color gently into the mixture, just sufficient to blend them so that the mass is uniformly colored and flavored—avoid over stirring: it might cause graining.

15. Now pour the candy on to the greased slab and within the form marked out by the bars, pour it so that a depth of about one quarter inch is covered. Do *not* scrape the boiler—just pour off all that comes away freely. Scraping encourages graining. The bars can be moved closer together if necessary to increase the depth, or moved farther apart to decrease it; but be sure that the bars form a closed rectangle in order to confine the candy and prevent unwanted spreading or spilling.

16. When the candy has cooled to a semi-solid condition, it can be marked or scored either by pressing the caramel cutter (suitably greased to prevent sticking) upon the surface, or by making a series of parallel lines on the surface with the edge of the palette knife pressed into the surface about one inch apart. Make another series of lines at right angles to the first, also about one inch or less apart. When cool, the candy will be marked in suitable sizes for consumption. It will break easily and crisply at the scored marks, providing they have been properly made, and the boiling instructions followed without mistake. The squares are allowed to cool, and can be wrapped in pieces of waxed paper cut to size for the purpose, and placed in a covered can until eaten.

This exercise is basic in hard candy making and can be repeated using different colors and flavors for variety and practice. The principles and notes learned from this lesson apply to factory scale operations of 25 or 100 pounds, just as well as they do to the modest one pound weight or thereabouts, made in this lesson.

NOTE. The addition of citric acid powder to the batch is customary (whenever it can be made without harmful inversion results) to bring out the flavors of orange, lemon, lime, cherry, tart fruits, and berries. It is unwanted in peppermint, clove, and spice flavors.

Note On Thermometers And Boiling Points. It has been assumed that not all students are familiar with thermometers and how to use them. Accordingly a brief description of how to use the candy thermometer and understand its graduations has been made for all who need the information. There is one other thing the student should know and that is: whenever a definite temperature of cooking is mentioned in candy making instructions, it always refers to, and is true only for places located at sea level. *Why sea level?* Boiling points of candy mixes, vary with altitude. Thus the boiling point of water is 212 degrees Fahrenheit at sea level. Water will boil at 211 degrees at an altitude 550 feet above sea-level, and decreases about one additional degree for every increase in altitude of 550 feet. A correction therefore has to be applied to the cooking temperature where the elevation is high enough to throw results off. When cooking instructions call for a temperature of say 310 at sea level, if the place of cooking is 550 feet above sea level, then the cooking must be done at 309 degrees to obtain correct results.

A Simple Method of checking both the thermometer and the correct cooking temperature for a given location, is to place the thermometer in briskly boiling water. If the thermometer is correct, and the location at sea level, a temperature of 212 degrees Fahrenheit will be registered. Should this figure not be shown, then either the thermometer is incorrect, or the location is above sea level, or both factors may be operating. Supposing a temperature of 210 degrees is shown in boiling water, instead of the correct 212, then there is an error of two degrees, which must be allowed for by cooking 2 degrees lower when following set temperatures of cooking. This will hold true as a correction so long as the circumstances of checking remain unchanged; it must always be applied when using that thermometer in the same place. A careful candy maker will check his thermometer periodically, for it sometimes goes wrong. Once a week for checking a thermometer in constant use, is not too often for best results. Whenever possible, checking the thermometer at high syrup cooking temperatures is very desirable.

Practical Exercise In Making Butterscotch Squares

Clean and assemble the items used in the first exercise (omitting the citric acid and colors) have some salted-butter and lemon flavor on hand. Weigh off 1 lb. granulated sugar: measure 5 fluid ounces water; and 6 ounces corn syrup by weight: 1 ounce salted-butter by weight. Place the corn syrup and butter on one side until needed. Proceed with the exercise following steps 1 to 12, as already outlined, but taking the finishing temperature up to 290 degrees Fahrenheit this time. Withdraw the boiler from the heat, add the butter while stirring gently until all of it has been blended in. Next add ¼ to ½ teaspoonful lemon flavor, stir in until that too has been blended. Pour on to greased slab, between bars. When the candy is semi-cold, but still plastic, cut with greased caramel cutter, or palette knife. If desired a half pecan nut piece, can be pressed into each square, as a garnish, while the candy is still plastic.

Note On Flavor Additions. Flavors are volatile (that is: boil away when warm). The right time to add flavors in any candy making procedure is when the candy has been taken away from the flame or the source of heat removed or discontinued, but while the mass is still warm enough to permit mixing and blending with minimum evaporative losses.

(To Be Continued.)

The MANUFACTURING CONFECTIONER'S

Candy Clinic

The Candy Clinic is conducted by one of the most experienced superintendents in the candy industry. Some samples represent a bona-fide purchase in the retail market. Other samples have been submitted by manufacturers desiring this impartial criticism of their candies, thus availing themselves of this valuable service to our subscribers. Any one of these samples may be yours. This series of frank criticisms on well-known branded candies, together with the practical "prescriptions" of our clinical expert, are exclusive features of The MANUFACTURING CONFECTIONER.

Selected Best Candies of the Year

Assorted Hard Candies

ANALYSIS: Purchased in a Philadelphia department store at 2 pounds for $1.25. These hard candies are offered in a round tin. Appearance of package is good. Appearance of candy on opening is good. Colors, stripes, gloss, texture, flavors, centers, assortment are all good.

REMARKS: The best hard candy of this kind that the Clinic has examined in some time. Cheaply priced at $1.25 for 2 pounds. Well made and good eating. *Code* 1*T*50.

REVIEW: These hard candies had exceptionally good flavors. In almost all hard candies, we find cheap and imitation flavors. In a neat and attractive container, this hard candy assortment was cheaply priced at $1.25 for two pounds.

Hard Candy Pieces

ANALYSIS: Purchased in a Libertyville, Ill., supermarket at 1⅜ ounces, 3 for 10 cents. Appearance of package good. Container is folding box printed in brown and white. Candy's color, texture and taste is good.

REMARKS: The best sample of this type of hard candy the clinic has examined at this price in some time. Cheaply priced at 3 for 10 cents. *Code* 1*G*50.

REVIEW: For this price hard candy, the quality of the flavors was of the best. We find some very poorly made hard candy and many times, flavors in such confections are very rank.

Hollow Chocolate Santa Clauses

ANALYSIS: Purchased in a Chicago, Ill., variety store, 6 pieces, 3 ounces for 29 cents. Appearance of package was good. Contained is folding box, large side and top cellulose windows. Printed in red and green. Chocolate, molding, texture and taste are good.

REMARKS: The best molded piece of this kind we have examined this year. Cheaply priced at 29 cents for 6 pieces. *Code* 1*N*50.

REVIEW: The quality of this price chocolate hollow pieces is very poor as a rule. These pieces, however, were well molded and the quality of the ingredients was very good.

Milk Chocolate and Peanut Butter in Paper Cup

ANALYSIS: Purchased in a Boston drug store, at 5 cents for 1 3/16 oz. Appearance and size of piece are good. It consists of a good chocolate coating and a good peanut butter center in the shape of a pattie.

REMARKS: The best chocolate and peanut butter piece the clinic has examined in some time. *Code* 11*R*49.

REVIEW: This five cent piece was a little different than some we have examined. For a five cent pattie, it was well made and of good quality.

Vanilla Caramels

ANALYSIS: Purchased in a Chicago chain drug store 1⅝ ounces, 3 for 12 cents. Appearance of package is good. Six cellulose wrapped caramels overall wrapped in cellulose. Cellulose wrapper printed in white. The caramel's color, texture, and taste are good.

REMARKS: The best package at this price we have examined in some time. Suggest wrapper be printed in red to make package more attractive. *Code* 2*H*50.

REVIEW: Very seldomly do we get a sample of good caramels at this price. The quality of these caramels was exceptionally good. Most 5c packages of caramels are of poor quality, very hard and very tough.

Chocolate Caramel Roll

ANALYSIS: Purchased in a Chicago chain drug store at 1¾ ounces, 3 for 12 cents. Appearance of package is good. Wrapper is of glassine printed in maroon, white, and yellow. Color, texture, and taste of roll is good.

REMARKS: The best piece of its kind the Clinic has examined in some time. *Code* 2*F*50.

REVIEW: This piece is very cheaply priced but is a good eating caramel roll, and of very good quality.

Peanut Brittle

ANALYSIS: One pound at 39 cents purchased in a Chicago department store. Container is wax board in tube shape. Printed in blue and brown. Appearance of package is good. Color, texture, peanuts, and taste of the brittle are good.

REMARKS: A very good eating peanut brittle cheaply priced at 39 cents a pound. *Code* 2*G*50.

REVIEW: We get very few samples of nut brittle over the years, and most of those we do receive are poorly made and of poor quality. This brittle had a good fresh peanut taste and had a good amount of peanuts in it.

Peppermint Stick

ANALYSIS: Purchased in a 5 and 10 cent store in San Francisco, Calif., 2½ ounces for 5 cents. Appearance and size of stick is good. Cellulose wrapper, insert cellulose label printed in red, white, and green. Imprint of Santa Claus and green trees. Color of stripes, stripes, texture, and flavor are good.

REMARKS: Very cheaply priced at 5 cents. The best stick of this kind we have examined in some time. *Code* 2*E*50.

REVIEW: This was a neat and attractive package for the price. It had good flavors and workmanship and made good eating.

Assorted Ribbon Candy

ANALYSIS: Purchased in a San Francisco, Calif., department store, at 35 cents a half pound, and sold in bulk. Colors, stripes, texture, gloss, and flavors are all good.

REMARKS: One of the best ribbon candies we have examined in some time. Cheaply priced at 69 cents a pound. This quality of ribbon candy was sold around the holidays in the Eastern cities at 80 cents to 90 cents a pound in bulk. *Code* 2*A*50.

REVIEW: Ribbon candy is slowly

The SAVAGE
Scientific Cooling or Heating Slab

By Repeat Orders Candy Manufacturers have acclaimed this slab because . . . .

THE SAVAGE COOLING OR HEATING SLAB IS:

FASTER—Will cool about 20% faster than any slab on the market.
REGULATED—Will give even cooling or heating at all times. No hot spots whatsoever.

STRONG CONSTRUCTION—Steel plate highly ground and polished. Consumption of water is minimum. It will withstand 125 lbs. working pressure. It is permissible to use refrigerated water.

CONVENIENT—Iron pipe legs are equipped with extra long threads in order to adjust where floors are uneven. Available in standard sizes and special sizes to order. Also ideal for enrober bottomer table.

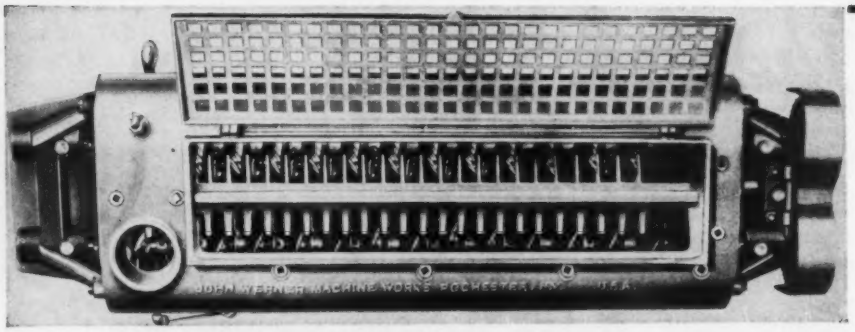
ECONOMICAL—Unnecessary to take apart and clean out sediment or do any of the usual repairs encountered with steel cooling slabs.

Since 1855

SAVAGE BROS. CO.

M. A. Savage, President • Richard J. Savage, Jr., Vice President

2638 GLADYS AVE. **CHICAGO 12, ILL.**



Inside view 50" Snow Flake Cream Beater, with baffles, open top and water jacket.

"When your formula" includes corn syrup!

For smooth, white fondant that is uniformly tender

The Snow Flake Cream Beater is a MUST

The Beaters running between diagonal baffle plates assimilate all ingredients, aerating and whitening the Fondant.

Years of experience have proved and verified our claim that the Snow Flake Cream Beater is engineered to handle fondant with corn syrup better and faster, with the desired result at its maximum.

Make your next installation a Peerless Syrup Cooler and Snow Flake Cream Beater.

Peerless Fondant Coolers:
Werner Rapid Cooker & Cooler for syrups, blends etc.
Peerless Chocolate Kettles
Fondant Re-Melters:
Marsh-Mallow Beaters, Single and Double Action
Duplex Fondant Beater and Cooler, open style for Laboratory and retail use
Little Wonder Chocolate Kettles, for Laboratory and retail use
Little Wonder Sucker Machine, operated, for Laboratory and Retail use
Depositors:
Automatic Depositors and Printers
The Boardless Automatic Depositor, printer and cleaner, without the use of starch trays

JOHN WERNER & SONS, INC.

713-729 Lake Avenue **Rochester 13, N. Y.**

disappearing from the general market in most places. Retail stores still make a small amount. This ribbon candy was mailed from the West Coast and arrived in good condition. It was of very good quality and workmanship.

Filled Hard Candies

ANALYSIS: Purchased in a Chicago department store at 59 cents a pound. Container is a key tin printed in brown, yellow and white. Attractive looking tin. Appearance of package on opening is good. Color, texture, center, and taste of candies are good.

REMARKS: The best piece of this kind the Clinic has examined in some time. *Code* 2D50.

REVIEW: Filled hard candy is one of the most abused pieces. Hard centers, poor flavors and poor workmanship are but a few of the common faults. These filled hard candies were well made, had a thin jacket, and soft centers. They were a good eating piece.

Assorted Chocolate

ANALYSIS: Purchased in Chicago at 1 lb. for $1. The appearance of package is good. Box has extension edge top and bottom, white embossed paper, name embossed in gold, overall cellulose wrapper. Appearance of box on opening, good. Number of dark coated pieces found 15; light coated 18; and cellulose wrapped two (fruit nougat). Of the *dark coated* centers the vanilla caramel, orange cordial, vanilla cream, peppermint cream, fruit nougat, buttercream, maple nut cream, cashew cluster, raisin cluster, pecan cluster, and filbert cluster are good. Orange cream and pink cream have poor flavor. Of the *light coated* centers the date, vanilla caramel, cordial cherry, coconut cream, grape jelly, peanut butter, fruit nougat, chocolate cream, raisin and cream, marshmallow, and maple nut cream are good. The cellulose wrapped fruit nougats are good. Assortment is good.

REMARKS: One of the best one dollar boxes the clinic has examined in some time. *Code* 3D50.

REVIEW: Very seldomly do we find a good dollar box of assorted chocolates. Many times we wonder why the consumer buys the second box . . . or does he? These chocolates were good eating. Most of the centers were well made and the flavors were good. It was a very neat looking package for a dollar seller.

Toffee Pieces

ANALYSIS: Sent in for analysis as No. 4662. No price stated. Appearance of package is good. Container is round key tin printed in red, white and blue. Light board container. The toffee pieces are wrapped in foil; over-wrapped in cellulose. Toffee's color and texture are good, flavor is very good.

REMARKS: The best toffee we have examined in some time. Very good quality, well made, and good eating. Neat and attractive container. Suggest a retail price of $1.50. *Code* 3Z50.

REVIEW: Only infrequently do we

CONVEYORS

Corrigan bulk dry sugar handling and storage systems convey sugar from unloading point to storage and from storage to production.

Improve production facilities
Lower operation costs

J. C. CORRIGAN CO. INC.

41 Norwood St., Boston 22, Mass.

STANcase STAINLESS STEEL EQUIPMENT

STAINLESS STEEL DRUMS

MODEL 30--30 GAL.
MODEL 55--55 GAL.
(Covers available)

ECONOMY EQUIPMENT

RUGGEDLY CONSTRUCTED FOR LIFE TIME WEAR.
FULLY APPROVED BY HEALTH AUTHORITIES.

Manufactured by
The Standard Casing Co., Inc.
121 Spring St., New York 12, N. Y.

find a good eating toffee. Most of the samples are hard and lack flavor. This toffee was packed in an attractive tin. The quality was of the best, and the pieces had an exceptionally good toffee taste.

Buttercream-Almond Pattie

ANALYSIS: Sent in for analysis as No. 4660. Priced at 1 oz. for 5 cents. Appearance and size of patties are good. Wrapper is of glassine printed in blue and yellow. Pattie's dark chocolate coating is good. The center's color, texture, and taste are good.

REMARKS: Quality of coating and center are of the best. A fine eating pattie; tthe best we have examined of this type confection. Neat and attractive carton. *Code* 3*W*50.

REVIEW: We do not often examine a buttercream piece at this price that is fit to eat. Most of them have butter flavor that is vile. This piece had a good true butter taste and the coating was very good for a 5c seller.

Candy Corn

ANALYSIS: Obtained in New York. Container is folding box printed in yellow, white and blue. Oval shaped cellulose window. Appearance of package was good. Corn's colors, texture, and flavor are good.

REMARKS: A well made candy corn; one of the best we have analyzed in some time. Suggest a retail price of 5 cents. *Code* 3*Q*50.

REVIEW: This candy corn was very brittle and had a good flavor. Most candy corn is soft and tough.

Assorted Chocolates

ANALYSIS: Sent in for analysis as No. 4668. Priced at $1.25 the pound. Appearance of package is good. Box is of two layer type, full telescope. White embossed paper top printed in black. Valentine paper wrapper, imprint of hearts in colors. Tied with white grass ribbon. Appearance of box on opening is good. Coatings' (dark and light) colors and gloss are good; strings are fair. Of the *dark coated centers*, the chocolate coconut cream, chocolate paste, vanilla cream, vanilla caramel, vanilla fudge, sponge chip, and mint cream are good. Flavor could not be identified in the yellow cream. The pecan top chocolate cream is fair. Of the *light coated centers*, the vanilla cream, vanilla caramel, peanut butter cream, vanilla nut cream, pecan cluster, peanut cluster, and vanilla coconut cream are good. Could not identify flavor in the light yellow cream. The vanilla cream rolled in coconut (foiled) is good. Assortment is good.

REMARKS: One of the best $1.25-a-pound chocolate boxes we have examined this year. Suggest some of the flavors be checked, however. *Code* 4*J*50.

REVIEW: In the $1.25 Assorted chocolate class, we find very few good boxes. This assortment was better than most we examined but there is room for improvement at a retail price of $1.25 the pound.

Crest Laboratories

Harold Crooks, Director

Analysis of chocolate coatings and raw ingredients.

Microscopic analysis of all confectionery products for foreign matter.

Crest Laboratories
40-20 Twenty Second St.
Long Island City 1, N. Y.
STillwell 4-4091

SPEAS APPLE PRODUCTS
the Standard of Quality
for sixty years

NUTRL-JEL
for preserves, jams, jellies, marmalades

CONFECTO-JEL
for jellied candies

Powdered *Apple* Pectin
for CONFECTIONERS

CONCENTRATED APPLE JUICE

Plants in Apple Regions From the Atlantic to the Pacific

SPEAS COMPANY, General Offices, Kansas City 1, Missouri

QUALITY CANDIES DEMAND QUALITY CHOCOLATE COATING

MERCKENS QUALITY CHOCOLATE

MERCKENS CHOCOLATE COMPANY, Inc.

506-520 Seventh Street • Buffalo 1, New York

BRANCHES AND WAREHOUSE STOCKS IN

BOSTON, NEW YORK, CHICAGO, LOS ANGELES, OAKLAND, SALT LAKE CITY, SEATTLE

Chocolate Coated Sponge Bar

ANALYSIS: Purchased in a Milwaukee restaurant at 1 oz. for 5 cents. Appearance and size of bar are good. Wrapper is of glassine printed in yellow. Name in dark brown. Imprint of sponge in colors. Bar consists of two pieces. Dark coating is good. Center's color, texture, and taste are good. Sponge is very good.

REMARKS: One of the best chocolate coated sponge bars on the market. *Code* 4*G*50.

REVIEW: We find all kinds of sponge: soft, chewey, and some are almost solid. This bar was well made, very tender, and had a good flavor.

Almond Paste Bar

ANALYSIS: Purchased in a Libertyville, Ill. supermarket. Priced at three for 12 cents, ¾ oz. apiece. Appearance of bar is good. Inside wrapper is paper backed foil. Yellow cellulose outside wrapper printed in white and red. Bar's light coating is good. The center's color, texture, taste, and almonds are good.

REMARKS: The best bar of this kind the Clinic has examined this year. *Code* 3*I* 50.

REVIEW: Almond and kernel paste pieces are very popular, if made correctly. This bar had a very good almond flavor and was good eating.

Chocolate Cigars & Cigarettes

ANALYSIS: Obtained in New York. Appearance of package is good. Container is folding box printed in light brown and red. Two oval cellulose windows: Box contained solid chocolate cigars in cellulose tubes. The cigar's chocolate (dark) gloss, molding, and taste are good. The cigarettes solid light chocolate's color, gloss, molding, and taste are good.

REMARKS: A good looking novelty. Suggest a retail price of 25 cents. *Code* 3*U*50.

REVIEW: This was one of the best looking cigarette packagees we examined this year. The quality of the chocolate was very good. The quality of chocolate in most pieces of this kind is poor.

Chocolate Panned Raisins

ANALYSIS: Sent in for analysis as No. 4673. Weight of package is 1½ ozs. at five cents. Appearance of the package is good. It consists of a folding box, cellulose window, printed in pink and dark brown. The panning and finish of the raisins are good. The chocolate coating is good for this price candy. The taste and the raisin themselves are good.

REMARKS: One of the best five-cent packages of this kind we have examined this year. *Code* 4*F*50.

REVIEW: We get many samples of chocolate panned raisins and most of them are anything but good. Cheap coating and dry and hard raisins are the major faults. These panned raisins were good eating and of good quality. The workmanship was also very good.

Minted Garlic Almonds

ANALYSIS: Sent in for analysis as No. 4665. Sold in bulk, no price stated. The minted almonds' roast, texture, and flavor are good. The garlic flavored almonds' coating, almonds, texture, and flavors are good.

REMARKS: Something new in almonds. Very good eating and should be a good seller at $1.50 the pound. *Code* 4*C*50.

REVIEW: If you like a garlic flavor, you would enjoy eating these almonds. They were very well made and the right amount of garlic was used for flavoring.

Frosted Coconut Fudge Bar

ANALYSIS: Sent in for analysis as No. 4890 at 1¾ oz. no price stated. Appearance of the bar is good as is the size. The wrapper is of cellulose printed in blue. It is wrapped inside with a wax wrapper. The coating is good for a frosted coating. The color, texture, and taste are good.

REMARKS: One of the best frosted bars we have examined this year. *Code* 7*E*50.

REVIEW: Most frosted coatings have a rancid taste and are very greasy. This coating had a good taste and the bar was good eating.

Mellow Jellies

ANALYSIS: Purchased in a Chicago chain grocery store at one pound for 80 cents. The appearance of the package is good. It is square one layer type printed in light

blue and white tied with yellow grass ribbon. The appearance of the box on opening is good. The assorted gums and patties were good. Of the marshmallow and gum layers, colors, texture, crystal, and flavors were good.

REMARKS: One of the best boxes of this kind we have examined this year. Suggest the box be wrapped in cellulose to keep it clean. The box had dust and finger marks on the top. *Code 7G50.*

REVIEW: These jellies were very good eating and the quality was of the best. We seldom find good flavors in jelly and gum pieces.

Caramel Roll

ANALYSIS: Purchased at a Chicago chain store at three for 12 cents for 1¾ oz. The appearance of the package is good. It has a glassine wrapper printed in brown, white, and orange. The color texture and taste of the roll is good.

REMARKS: The best of this type of confection we have examined this year. *Code 7N50.*

REVIEW: We have examined this roll a number of times and always find it up to standard. It is very well made and good eating.

Licorice Twists

ANALYSIS: Purchased in a Chicago chain store at 1¾ oz. for 12 cents. Appearance of the package is good. The size is good. It has a cellulose wrapper printed in white. The color, texture and flavor of the twists are good.

REMARKS: The best five cent package of licorice candy of this type we have examined this year. *Code 7T50.*

REVIEW: We get a large number of licorice samples through the year, and most of them are good. This sample was of the best quality and had a good licorice flavor. It was tender rather than tough as are many samples.

Orange and Lemon Slices

ANALYSIS: Purchased in a Chicago chain grocery store. Sold in bulk at 75 cents a pound. The colors, texture, flavors, and sanding of the slices are good.

REMARKS: The best orange and lemon slices we have examined this year. *Code 7S50.*

REVIEW: The flavors in these pieces were outstanding. The workmanship was of the best.

Chocolate Coated Marshmallow Bar

ANALYSIS: Sent in for analysis as No. 4680. The appearance and size of the bar are good. It has a cellulose wrapper printed in white. The coating is good. The color texture and taste of the center are good.

REMARKS: One of the best coated marshmallow bars we have examined this year. Suggest red or blue printing on the wrapper instead of white. Almost any color would stand out better than white. *Code 7V50.*

REVIEW: Marshmallow bars in general are not very good, but are tough, hard and lacking in flavor. This bar was made very well, had a good flavor, and was good eating.

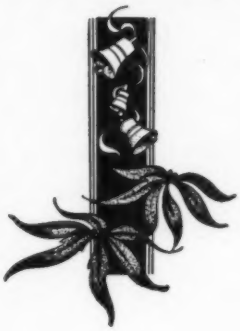
Rose Bud Mints

ANALYSIS: Purchased in a Colorado Springs, Colo. department store at 8 ozs. for 50 cents. The appearance of the package is good. The box is a one-layer type with a green paper top and the name embossed in gold. It has a cellulose wrapper. The appearance on opening is good. The color texture, crystal, and flavor of the mints are good. The molding is excellent.

REMARKS: The best box of this type we have examined this year. Slightly high-priced at 50 cents for a half pound. *Code 8B50.*

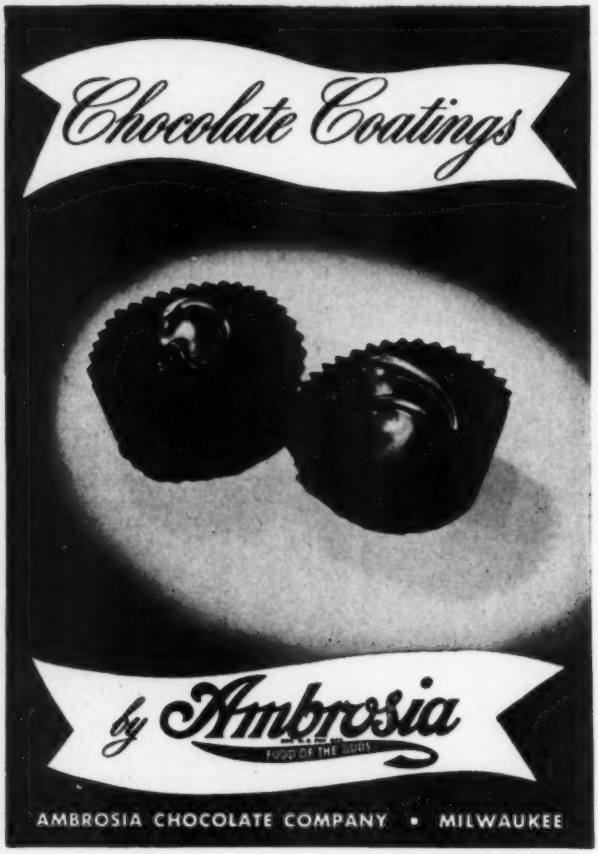
REVIEW: These mints had a very fine flavor and the workmanship was of the best. Most mints lack good flavors.

(Continued on page 44)

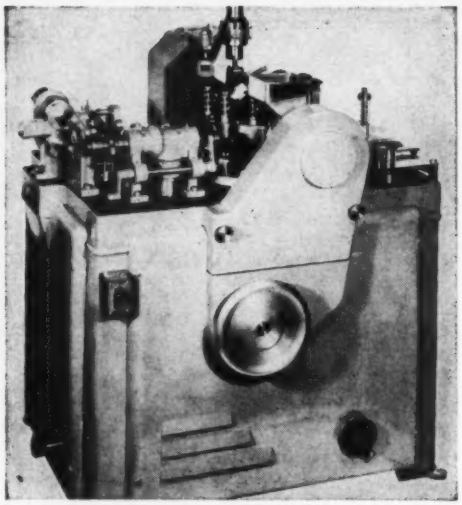


Greetings and Best Wishes
for Christmas
and the Coming Year

John Sheffman
and Associates



LATINI *Continuous*
DIE POP MACHINE



- high speed production
- controlled weight & size of pops
- interchangeable dies
- guaranteed performance
- economical operation

CHOCOLATE SPRAYING CO., INC.
2035-39 W. GRAND CHICAGO 12, ILL.
Rep. John Sheffman, 152 W. 42nd St., New York 18, N. Y.

Code 9C50
Chocolate Coated Peanut Butter and Molasses Bar
1⅜ ozs.—3 for 12 cents

(Purchased in a Chicago chain department store)

Appearance of Bar: Good.
Size: Good.
Wrapper: Glassine printed in orange, white, and blue.
Coating: Milk, good.
Center of Hard Candy: (Molasses, peanut butter, and caramel).
Color: Good.
Texture: Good.
Taste: Good.
Remarks: The best bar of this kind we have examined this year.
Review: Most bars of this type do not have a good peanut butter center. They are either rancid or they do not have a true peanut butter taste. In some samples, more cereals are used than peanut butter. This bar contained a very good peanut butter taste. The bar was well made and good eating.

Code 9E50
Milk Chocolate Coated Caramel Nut Roll Bar
1½ ozs.—3 for 12 cents

(Purchased in a Chicago chain department store)

Appearance of Bar: Good.
Size: Good.
Wrapper: Glassine printed in brown, yellow, and red.
Coating: Milk, good.
Center:
Color: Good.
Texture: Good.
Taste: Good.
Remarks: The best bar of this kind we have examined this year. We have examined this bar many times and have found that the quality and workmanship are of the best.
Review: There are a large number of bars of this type on the market but we find that this is still the best of its kind.

Code 9I50
Chocolate Coated Peanut Cream Pattie
2¼ ozs.—10 cents

(Purchased in a Chicago railroad station)

Appearance of Pattie: Good.
Size: Good.
Wrapper: Glassine printed in maroon, red and yellow. Imprint of name scattered over pattie in white.
Coating: Light, good.
Center:
Peanuts: Good.
Cream: Good.
Remarks: The best pattie of this kind we have examined this year.
Review: Although this pattie was 10c, the size and quality were very good. Peanuts were brittle, a very good point since most peanuts are soft in patties of this type.

Code 9M50
Chocolate Coated Nougat Bar
1½ ozs.—5 cents

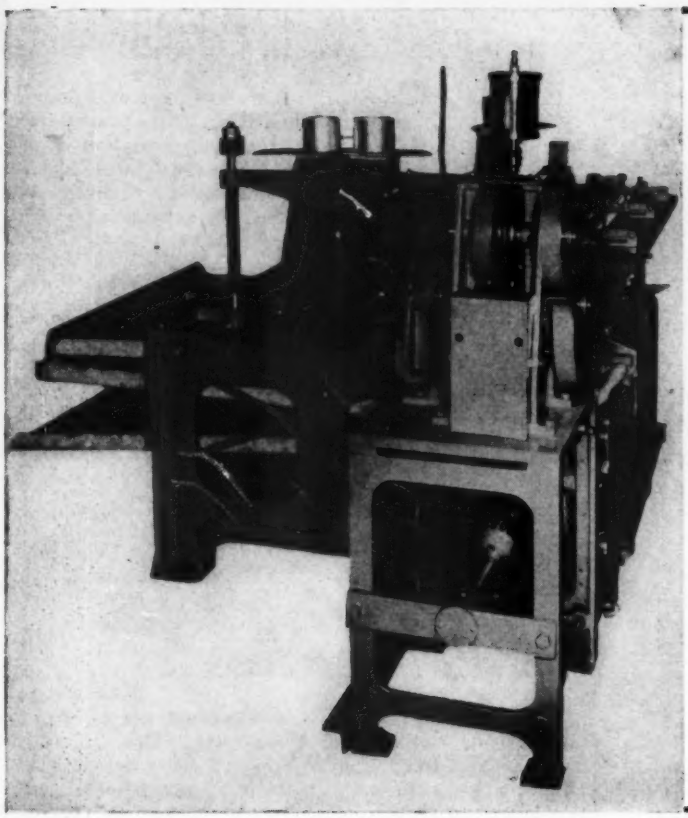
(Purchased in a San Francisco chain drug store.)

Appearance of Bar: Good.
Size: Very good.
Wrapper: Glassine printed in red and white.
Coating: Good.
Center:
Color: Good.
Texture: Good.
Taste: Good.
Remarks: One of the best chocolate

CODE DATING
CANDY BARS

Automatic—Any Speed
5 to 10 Built-in Digits
Permits quality control and proper stock identification

KIWI CODERS CORP.
3804-06 N. Clark St., Chicago 13, Ill.



Model E Automatic Hard Candy Machine

For producing spherical and Seamless shape hard candy

Balls • Kisses • Barrels • Olives

There are over 100 different shapes.
For clear or pulled goods.
For hard candies that are free of fins and sharp or abrasive edges.
It makes hard candies that are smooth and easy on the mouth.
One operator spins directly to the machine.
Capacity 3,000 to 10,000 pounds.
Our Model E incorporates all the developments of previous experience plus automatic self-compensating clutch which takes care of the variation in batch temperature.

Peerless Fondant Coolers:
Werner Rapid Cooker & Cooler for syrups, blends etc.
Peerless Chocolate Kettles
Fondant Re-Melters:
Marsh-Mallow Beaters, Single and Double Action
Duplex Fondant Beater and Cooler, open type for Laboratory and retail use
Little Wonder Chocolate Kettles, for Laboratory and retail use
Little Wonder Sucker Machine, operated, for Laboratory and Retail use
Depositors:
Automatic Depositors and Printers
The Boardless Automatic Depositor, printer and cleaner, without the use of starch trays

There is no Substitute for Experience

John Werner & Sons, Inc.

713-729 Lake Ave., ROCHESTER 13, N. Y.

coated nougat bars we have examined this year.

Review: There are a number of chocolate coated nougat bars on the market, but we get very few good ones. This bar was well made and was a true nougat. Many nougat bars are like salt water taffy.

English Toffee Bar
¾ ozs.—3 for 12 cents

Appearance of Bar: Good.
Size: Good.
Wrapper: Glassine printed in brown, blue, and white.
Coating: Milk, good.
Center:
Color: Good.
Texture: Good.
Taste: Good.
Remarks: The best bar of this kind we have examined this year. Well made and good eating.
Review: This bar is cheaply priced but is of very good quality.

Code 9T50
Assorted Cuts
6 ozs.—49 cents

(Sent in for analysis as No. 4696)

Appearance of Package: Good.
Container: Round tin, key type, printed in red, silver, and white. Pieces are wrapped in colored printed cellulose. Inside printed band of wax backed foil.
Candy:
Colors: Good.
Texture: Good.
Flavors: Good.
Remarks: The best box of this kind we have examined in some time. Cheaply priced at 49 cents.
Review: This container was very attractive, and the candy of the best quality. The workmanship was also very good.

Code 10C50
Sugar Wafers
8 ozs. for 23 cents

(Purchased in a Chicago chain drug store)

Appearance of Package: Good.
Container: Folding box printed in green and white. Cellulose window.
Wafers: Lemon, Orange, Peppermint, and Wintergreen.
Colors: Good.
Texture: Good.
Gloss: Good.
Flavors: Very Good.
Remarks: The best package of this kind we have examined this year. Flavors are exceptionally good. We seldom get samples with this grade of flavors.
Review: These sugar mints were outstanding in flavors. Most confections of this type do not have good flavors and many are hard. These were well made and good eating. They were cheaply priced at 23c.

Code 10E50
Lemon Drops
3½ ozs. for 10 cents

(Purchased in a Chicago drug store)

Appearance of Package: Good.
Size: Good.
Container: Folding box printed in yellow, green, red, and white. Drops are in a wax paper bag.

Drops:
Color: Good.
Sugaring: Good.
Texture: Good.
Flavor: Good.

Remarks: The best hard candy lemon drops we have examined this year.

Review: Many fruit drops we examine lack good flavors. Many are loaded with acid and contain no flavor. These drops had a good, true lemon flavor.

Code 10K50
Chocolate Mint Wafers
1¾ ozs. for 10 cents

(Purchased at a Boston drug store)

Appearance of Package: Good.
Size: Good.
Container: Folding box of white board, cellulose window. Printed in green.
Color: Good.
Gloss: Good.
Texture: Good.
Flavor: Good.

Remarks: The best chocolate mint wafers of this kind we have examined this year.

Review: This was a neat and attractive package. The quality of the chocolate and the flavor were better than we find in this type of confection.

COATED CHERRIES

with cordial or rich creme centers easily and uniformly made with

VOORHEES

RUBBER

CANDY MOLDS

"The Mold makes the Difference!"

Here's why so many manufacturers are discarding antiquated methods and using Voorhees Rubber Molds:—

1—Easier to work—Speed and Simplicity

2—No foreign substances—Absolute Cleanliness

3—Better eating quality

4—Better finished product

5—Eliminates waste—Saves Time

6—Molds last longer

Order a trial mold from your jobber or write us direct.

VOORHEES

RUBBER MFG. CO., INC.

151 East 50th Street

NEW YORK 22, N. Y.

Jesse W. Greer Dies

J. W. GREER, inventor, manufacturer and civic leader, died at his home in Cambridge, Massachusetts, November 1, at the age of 73. He was the founder of the J. W. Greer Company, Cambridge, manufacturers of production machinery for the confectionery, baking, and other industries. Long a student of the problems of municipal government, he was active in bringing City Manager Goverment ("Plan E") to Cambridge and had served as chairman of the Plan E committee. The Cambridge operation of the plan is used as a point of reference by other cities considering this form of government.

The late J. W. Greer, Chairman of the board of J. W. Greer Company, Cambridge, Mass.

As an industrialist, Mr. Greer's outstanding personal characteristic was his faith in the unmatched power of improved management-labor relations. His belief in teamwork based on an appreciation of mutual values carried over into his life as a citizen and made him a leader in municipal reforms. In addition to heading Cambridge's Plan E committee during formative years, he was for many years a member of the city's Planning Board. He was an executive committee member of the Chamber of Commerce, and a member of Amicable Lodge A. F. and A. M. J. W. Greer was one of New England's leading Baptist laymen. Jesse W. Greer was a native of Texas and there he established a small candy factory where he invented several new candy-making machines. This plant was lost to him by fire in 1912, and for the next four years he worked for the King Candy Company in Fort Worth.

In 1917, Jesse Greer came North and settled in Massachusetts. The present J. W. Greer Company was founded at Cambridge in September of that year. His money assets amounted to about $500. With him came his wife and his two sons, Fred and Don.

Although a complete stranger in the city, Mr. Greer convinced Mr. Close then a leading manufacturer of chocolate candy, that he had an idea that would revolutionize certain processes in the manufacture of chocolate candy. With the encouragement of Mr. Close, he made the first Greer chocolate cooler in the East. This machine was built according to a standard that later became recognized by Mr. Greer's business associates as characteristic of him: it was finished on time and produced more than was promised.

By 1920, in steady strides the company had grown from a one-room operation—Mr. Greer, one machinist, and Mrs. Greer as bookkeeper, advertising and sales counsel—to a concern with a modern factory, 250 employees and world-wide contacts.

In 1933, the depression threatened the collapse of the candy machinery market. Greer capital was ventured on a large scale experiment to bring technical progress to the baking industry, an industry that was relatively more depression-proof. His vision paid off. New lines of baking and biscuit equipment were engineered and manufactured after being proved under actual bakery conditions in the new model plant. The band oven for continuous baking of cookies and crackers was introduced. Cookie production of this new plant grew to such a substantial volume that some of the employees purchased the plant and equipment becoming a now well known cookie company.

In 1925, Fred W. Greer, eldest of the two sons, graduated from Massachusetts Institute of Technology and joined his father's firm. His knowledge of mechanical engineering enabled him to make a number of inventions and improvements in Greer machines.

In 1930, Don, S, Greer, younger son, of the founder, graduated from Harvard's schools of engineering and business where he had specialized in mechanical engineering, business management and organization. Since his father's retirement in 1946 to the position of chairman of the board, Fred has been president and chief engineer of the company. His brother Don is vice-president and general manager. Mrs. J. W. Greer continues in her role as consultant. Thus, active management of the company continues in the hands of the family responsible for its original development and continued growth.

Like many other peace-time manufacturers, Mr. Greer saw his business transformed, almost over night, to 100 per cent war production. One month before Pearl Harbor, the company was producing 30 per cent of war goods and 70 per cent civilian. Two months after Pearl Harbor, the company was converted 100 per cent to war production. In addition to principal productions of secret devices, the output included a variety of naval ordnance, ammunition hoists for destroyers, and submarine elements.

Mr. Greer was chairman of the Industrial division of the Cambridge Scrap Drives and Red Cross Blood Donor Committee for the duration of the war.

During the war, the J. W. Greer Company was awarded the coveted Army-Navy "E" flag four times—an honor achieved by very few companies. In accepting these honors for his company, Mr. Greer said that he attributed the winning of the award to the results of exceptional employee-management teamwork, a relationship in action which he had always sought to encourage and maintain. The same principle guided his course in community activities. He believed that any foundation for progress depends on a mutual understanding of each other's problems, and he did more than his share to make such understandings possible. He sincerely believed in and lived by "The Golden Rule."

• **Army quartermaster** specifications are available now upon request at the New York Quartermaster Procurement Agency, 111 E. 16th St., New York 3; Chicago Quartermaster Depot, 1819 W. Pershing Road, Chicago 9, and Oakland Quartermaster Procurement Agency, Oakland Army Base, Oakland 3, Calif.

• **The Wholesale Trade** report of U. S. Department of Commerce, September issue, shows wholesalers sales up 5% from September 1949, and inventory up 3% over the previous year. The largest increase in sales was in the south central states and the largest increase in inventories was in the south Atlantic states.

3 things to remember when you order Invert Sugar!

KRIST-O-KLEER

makes candies taste better! This uniform invert sugar helps keep the true, fresh flavor from drying out of your candies.

KRIST-O-KLEER

makes candies look better! Because it controls moisture, Krist-O-Kleer gives candy a fresh, appetizing appearance.

KRIST-O-KLEER

makes candies keep better! Confectioners have discovered that Krist-O-Kleer helps keep "sweets" fresher, because it retains moisture longer upon exposure to air and low humidity.

Order today from National's full line of Krist-O-Kleer invert and partial invert sugars.

THE NATIONAL SUGAR REFINING CO.

New York, N. Y. and Philadelphia, Pa.

For the **BEST** *in...*

COCONUT OILS
(76° and Hydrogenated)

COTTONSEED OIL

PEANUT OIL

HARD FATS

Look to

The BEST FOODS, Inc.

NEW YORK CHICAGO
SAN FRANCISCO

Makers of America's
Largest-Selling Brands of Margarine and Mayonnaise

Confectioners' Briefs

• **Carl W. Ruby,** assistant vice-president of the Beech-Nut Packing Company, has been appointed manager of sales for both the company's food products and chewing gum divisions. Mr. Ruby began his association with Beech-Nut in 1931 as a confectionery salesman in the Kentucky division. Since 1941 he has been manager of food products sales.

• **Stephen F. Whitman & Son, Inc.,** Philadelphia, has broken ground for a new Chicago office and warehouse at 4409 S. Kildare Ave. The new $120,000 building will serve to facilitate distribution in the middle west. Measuring 15,000 square feet on 22,500 square feet of ground, the structure will devote 2,000 feet to office space. James Lindsey is manager of this office.

• **Up-To-Date Candy Manufacturing Company,** New York, and its subsidiary, Arden Candies, Inc., have appointed Hy Becker a vice-president. Mr. Becker will assist the president, A. J. Dreitzer. Continuing as vice-president and director of sales is Robert J. Johonot. Mr. Becker was formerly general sales manager of Huyler's.

• **Huyler's,** New York, have announced the appointment of Jack Green, formerly of Heller Candy Company, as sales manager of the Ridley division. Mr. Green was previously associated with Ridley's for a number of years.

• **E. Russell Bartley,** personnel director of Bunte Brothers, has been named chairman of the social security committee of the Illinois Manufacturers Association.

• **W. A. Yantis,** President and Director of Sales of Chase Candy Co., St. Louis, has appointed Jack Dubin, well known New York broker, to represent the company in the metropolitan area for the Chase line. Herbert M. Smith will represent the company in up-state New York. Both men are members of the National Confectionery Salesmen's Association and been in the industry many years.

• **Sam Shankman,** executive vice-president and general manager of Leaf Brands, Inc., Chicago, has announced two additions to their sales organization. Robert Goldstein was named sales manager of the Count Goods Division, and Judson Horell sales manager of the Bulk and Package Division.

• **Joseph E. Shorin** of Topps Chewing Gum, Inc. has accepted the chairmanship of the Confectionery Division of the 1950 Fund Appeal for the Travelers Aid Society of New York.

• **Sweets Co. of America, Inc.,** Hoboken, N. J., reports for the nine months ended Sept. 30, net profit of $386,129 against $411,776 in the same period last year.

• **Sophie Mae Candy Co,** Irvington, N. J., goes into production in Atlanta, Georgia. J. P. Coppedge, Sr. is head of the Atlanta plant. Peanut brittle is the specialty manufactured. J. B. Coppedge, Jr. is manager of the Irvington plant. It is reported that the Atlanta plant represents an investment of about $250,000.

• **Peter Paul, Inc.,** Naugatuck, Conn., is offering a $1.00 ball point pen for 25 cents and a coupon from a package of Walnettos, Chocolettos, or Coconettos, according to H. M. Billings, sales manager. The name of the consumer will be engraved on each pen.

• **Kelling Nut Company,** Chicago has leased a 60,000 square foot plant in Paterson, N. J. The company in 1931 introduced illuminated display cases for selling salted nuts. Today the company reports they have 15,000 cases leased by stores.

• **Life Savers Corp.,** Port Chester, N. Y. and subsidiaries reported for nine months net income of $1,978,672 as against $1,674,298 last year.

• **Tom Huston Peanut Co.,** Columbus, Ga. reported net income to August 26th a net income of $650,-977 compared to $607,227 in the previous fiscal year.

• **Griggs, Cooper & Co.,** St. Paul, have appointed Gruber Sales Co., Detroit as broker in Michigan.

• **Lowney's, Neilsen's and Moir's** of Canada announced a reduction in price of their bars by 2c to the 6c they cost last September. Fry-Cadbury are maintaining their price at 6c, officials of Rowntree's and Patterson's report prices are being considered.

• **Consolidated Tobacco Company,** Chicago, recently purchased Sam Cassel Company and has emerged as a leading distributor in the Chicago market. They carried a full page advertisement in a Chicago newspaper telling of their products and their growth. Originally founded in 1926 as M. Udelowich & Company, the Company has steadily grown in products handled and accounts serviced.

• **United Wholesale Company,** Dallas, Texas, are now in their new quarters at Slocum & Howards Streets. The new quarters have 5,500 square feet, with 200 feet of head-in parking place. The building is air-conditioned thruout. They deliver their merchandise in insulated trucks. H. R. Baker is partner and general manager. This wholesale house covers a 75-mile radius, skipping Ft. Worth, but serving customers west of there.

• **Bureau of the Census** has released the confectionery report for August 1950. Sales of confectionery and chocolate products are estimated at $80 million for August, 59 percent above July and 35 percent above August of last year. Manufacturer-wholesalers reported sales 53 percent above July level and 32 percent higher than last year. Sales of manufacturer-retailers, 7 percent higher than last year, were up 10 percent from July. Chocolate products sales increased by 131 percent over the previous month and by 62 percent over August 1949, but for the year to date were still somewhat below last year's eight months total. Average prices per pound were slightly higher except general line houses who reported a decrease. Dollar sales of bulk goods were up 52 percent compared to August 1949, while poundage increased by 30 percent.

The pre-eminent candy makers of the nation have tested "BURCO" Products and found that they are outstanding.

You, too, will find them reliable, economical producers of repeat business.

Outstanding Formula Using CENTER-ROLL KREME

We recommend that you try Center Roll Kreme, the finest Hand Roll Cream on the market. An outstanding formula for Hand Roll Chocolates using Center Roll Kreme is:

Place in a kettle 50 lbs. Sugar, 5 lbs. Corn Syrup, 3 lbs. PECTOLENE and add sufficient water to dissolve. Cook to 244 degrees. Cream up on beater. When cloudy add 11 lbs. CENTER ROLL KREME. Flavor to suit. Cream to set, hand roll and dip in Chocolate.

CONFECTIONERS PECTIN for Cut Slab Jellies.

NU-MILK Whole Milk in Plastic form for Caramels and Fudges.

FRESH COCOANUT PASTE Ready to use for Chocolate or Bon Bon Centers.

PECTOLENE a Pectinized Invert Sugar Product.

CENTER-ROLL KREME for Soft-flowing Creams.

KREME-TEX for Creamy Fudge and Caramels.

NU-KREME Grade A of all Nougat Creams.

DIPPING PIECES Molasses Honey-comb Chips, Peanut Butter Chips, Toasted Coconut Chips, Chocolate Center Chips, Almond Butter Sticks, Mint Pillows and Peanut Butter Pillows.

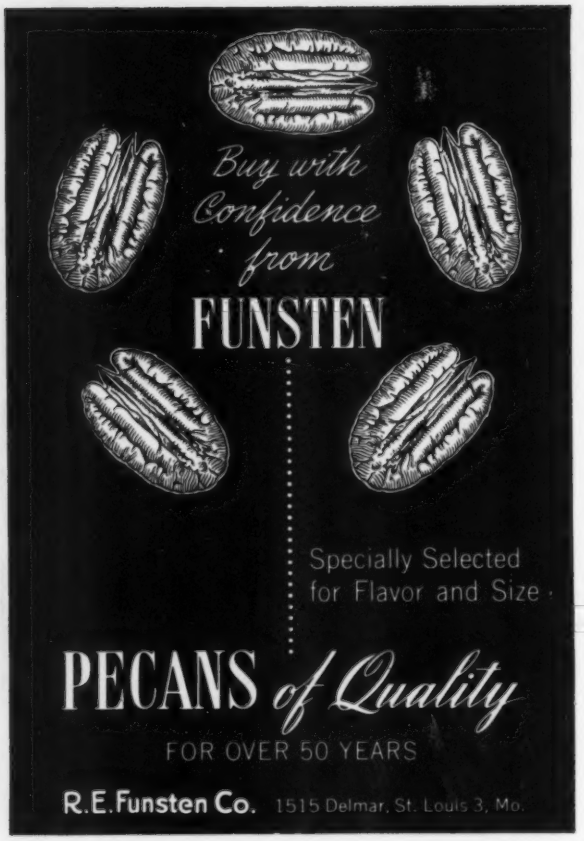
BURCO NOUGAT CREME The All Purpose Nougat Cream.

TOPPINGS Marshmallow, Butterscotch, Caramel and Chocolate Fudge.

Formula Book "RECIPES FOR BETTER CANDIES" sent with initial order

BURKE PRODUCTS CO. INC.

317 W. HUBBARD ST. CHICAGO 10, ILLINOIS


Buy with Confidence from
FUNSTEN
Specially Selected for Flavor and Size
PECANS of Quality
FOR OVER 50 YEARS
R.E. Funsten Co. 1515 Delmar, St. Louis 3, Mo.

NESTLE'S • PETER'S • RUNKEL'S
CHOCOLATE
COATINGS
LIQUORS
COCOAS

LAMONT, CORLISS & CO.
60 Hudson St., New York 13, N. Y. Branches in Principal Cities

News of Associations

WCSA Discusses Merger

One of the most important decisions the association has had to make in some years is the proposed amalgamation of the NCSA and WCSA. The Western Confectionery Salesmen's Association has always been a closely knit group and had a strong organization. However, times and conditions change and many believe that a national association representing all candy salesmen and brokers will present a united front. The 36th convention opens sessions on Thursday, December 7th at the Congress Hotel, and the recommendation will be submitted to the Membership.

Today there are the National Confectionery Salesmen's Association and the Western Confectionery Salesmen's Association. Also, there are approximately eighteen local candy clubs in various sections of the country. For some time there has been discussion in regard to a truly national organization of candy salesmen and candy brokers—an organization so beneficial that every man selling candy would be a member and staunch supporter.

With this in mind, both NCSA and WCSA at their last annual conventions appointed committees. The committees have functioned and joint meetings have been held. So far much has been accomplished and the committee has prepared a report.

Chicago Group of AACT elect new Officers

November 1st the annual elections were held and the following were elected officers for the coming year. Walter Richmond, Riggi Candy Co., Chicago, was elected chairman; and Mrs. Gloria Dotzenroth, James B. Long Co., secretary. Mr. Norman W. Kempf, Walter Baker Chocolate and Cocoa Division of General Foods, gave a talk on Cacao which appears elsewhere in this issue.

Confectionery Salesmen's Club of Baltimore

This Club is celebrating its 27th anniversary on

coffee cost in half . . . users like taste better!
coffee forte is a mellow blend of select coffees, fortified with other natural extractives which build up such a potent coffee flavor that you use less than half as much as pure coffee concentrate. Per pound, it costs only 5 percent more. Those who try it stay by it. Demand details quick!
AMERICAN FOOD LABORATORIES, Inc., 860 Atlantic Ave., Brooklyn 17, N. Y.

December 9th at Lord Baltimore Hotel, Baltimore. The party will be stag. A dinner will be served at 6:30, a gala floor show follows.

At the regular meeting held Monday, Nov. 6th, the following were elected officers for the year 1951: Pres. Milton Rodberg, Phila., Pa., Vice Pres. John W. Hunt, E. J. Brach & Sons, Chicago, Ill., Secy-Treas. Harry Green, Sweets Co. of America, Hoboken, N. J., Board of Directors: Chairman—John G. Pentz, John F. Birkmeyer & Sons, Baltimore, Ernest Pritchard, Smith Bros., New York, T. Donal Elliott, Goldenberg Candy Co., Philadelphia, W. J. Hoover, C. N. Miller Co., Boston, Arthur Stockett, Keppel's, Inc., Lancaster, Pa., John A. Wintz, Voneiff-Drayer Co., Baltimore. Installation will take place at the Annual Dinner Meeting, Monday, December 4th.

Guests present were: Mr. C. M. McMillan, Executive Secy., NCWA and Mr. James E. Mack, Manager Wash. Office, NCA., Mr. E. Weinstein, The Gold Craft Co., Washington, D. C.

Pennsylvania Manufacturing Confectioners' Assn.

The tentative program for the fifth annual production conference of the Association at Lehigh has been released. Mr. C. R. Koekel opens the sessions on Thursday morning, April 26th. Dr. H. A. Neville discusses "Research"; Fred Greer talks on "Humidity and Temperatures in the Coating Tunnel", and Lloyd Slater on "Instrumentation", Cletus Gallagher on "Pectins". The Reuse of Trimmings is a symposium by W. H. Childs, V. R. Ciccone, C. Carilli, P. Laureys acting as moderator. G. F. Becker talks on "Fats, Oils, Hard Butters, Dr. Nelson Waston on "Time vs Temperature Study". Others appearing on the program are James A. King and Dr. Korfhage. The complete program will be released later.

New York Group AACT Holds Meeting

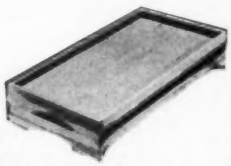
Melvin J. Mickevics, research chemist-sales engineer of J. W. Greer Company, gave a talk on "Can we Simplify Chocolate Handling" on November 13th. His talk appears elsewhere in this issue.

NCA Holds Mid-West regional meeting

"How to Gear Your business to National Mobilization" was the subject of an all-day conference in Chicago November 16th. Subjects discussed were Manpower, Conservation of Materials, How NCA will mobilize to help the manufacturers, and Candy for the Armed Forces. The Board of Directors held a meeting in Chicago on November 15th. All sec-

Starch Trays

- *At their best!*
- *At lowest prices!*



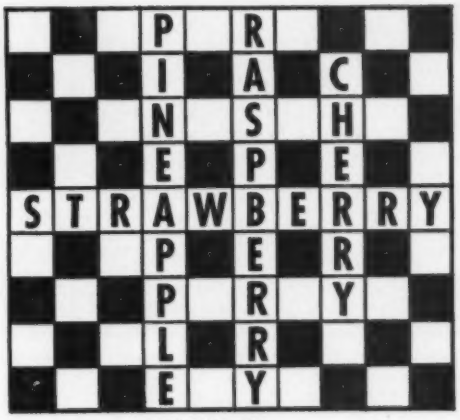
Masonite and Solid Wood Tongue and Grooved Glued Bottoms Nailed—Cement Coated Drive Screws—Lock Corner and Waterproof Glued Hard and Soft Woods

also: Dipping Boards—Starch Tray Dollies
Pan Room Trays—Wire Bottom Trays
Mould Boards
And All Other Affiliated Wood Products

Ask for FREE Sample—and quotation

BAYWOOD MFG. CO., INC.
11-13 Sterling Pl. Brooklyn 17, N.Y. NE 8-9832

...Puzzled??...



Imitation
TRUTASTE FLAVORS
ARE THE SOLUTION
Write for information

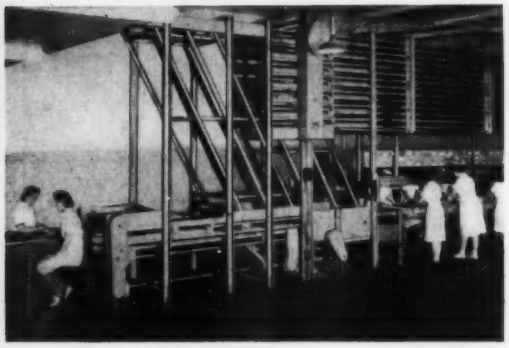
NEUMANN·BUSLEE & WOLFE INC.
226 W. Huron St. Chicago 10, Ill.

NEW REVOLVING PAN
by
LATINI

- heavy gauge copper machine spun bowl
- convenient on-off switch with overload switch
- shaft mounted on self-aligning ball bearings
- stand enclosed, easily cleaned. Sanitary
- perfectly balanced for accurate operation

CHOCOLATE SPRAYING CO., INC.
2035-39 W. Grand Chicago 12, Ill.
Rep. John Sheffman, 152 W. 42nd St., New York 18, N. Y.

GREER

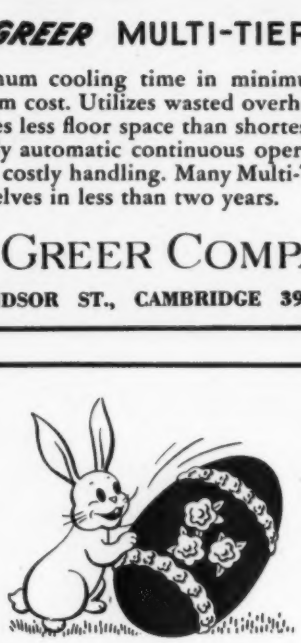


GREER MULTI-TIER

for maximum cooling time in minimum space at minimum cost. Utilizes wasted overhead space . . . requires less floor space than shortest tunnel. Completely automatic continuous operation . . . eliminates costly handling. Many Multi-Tiers pay for themselves in less than two years.

J. W. GREER COMPANY

138 WINDSOR ST., CAMBRIDGE 39, MASS.



Creamery
Molding
Milk Chocolate
For Hollow Goods

HOOTON
CHOCOLATE COMPANY
NEWARK 7, NEW JERSEY

tions of the country were represented at these meetings.

The Directors approved a policy of holding regional or local meetings wherever conditions warrant the need for NCA sponsored conferences. Conferences in the South and the Mid-East were tentatively scheduled for early 1951 and aid will be given to the West Coast Manufacturers in promoting attendance at their meeting on March 1 and 2.

An intensive fund raising program by the NCA Council on Candy during the last six weeks of 1950 was approved by the Directors. The campaign is necessary in order to make possible the expansion of the Council's activities such as showings of "CANDY AND NUTRITION" in schools and of "THE SWEETEST STORY" in commercial theatres and increased distribution of school education aids and steps to counteract attacks on candy.

Conventions -- Meetings

Dec. 7-9—Western Confectionery Salesmen's Association, Convention, Congress Hotel, Chicago.

Dec. 9—Confectionery Salesmen's Club of Baltimore, Lord Baltimore Hotel, Baltimore, Md. Banquet (stag)

Dec. 11-12—Production conference, American Management Association, Hotel Drake, Chicago.

Jan. 15-18—2nd Plant Maintenance Show and Conference, Auditorium, Cleveland, Ohio.

Jan. 21—Mid-Year Meeting, Associated Retail Confectioners, Commodore Hotel, New York City.

Jan. 22-26—10th Heating and Ventilating Exposition, Commercial Museum, Philadelphia, Penna.

Feb. 11-13—Nat'l Assn. of Variety stores, Muny Auditorium, Atlanta.

Feb. 18—Nat'l Food Brokers Assn., Chicago.

March 1-2—Western Manufacturers annual meeting. Fairmont Hotel, San Francisco.

March 27-29—Dairy Manufacturers' Conference, University of Wisconsin, College of Agriculture, Madison, Wis.

April 17-20, 1951—Packaging Conference, American Management Association, Auditorium, Atlantic City, N. J.

April 26-27—Fifth Annual Production Conference, The Pennsylvania Manufacturing Confectioners' Assn. Lehigh University, Lehigh, Penna.

April 30-May 4—American Material Handling Society, International Amphitheatre, Chicago.

June 3-6—National Confectioners' Association convention, Stevens Hotel, Chicago.

June 7-9—National Candy Wholesalers Association Convention, Palmer House, Chicago.

June 17—Institute of Food Technologists Meeting, New York City.

5 ROLL REFINER H. M. S.

INSTALLATIONS
In Successful Operation in Chocolate Plants in the United States and throughout the world.

PERFORMANCE
A Smoother Chocolate. Refines to the Greatest Fineness Ever Obtained. Utmost Uniformity and Production.

Exclusive Representation in the United States and Canada and Manufacturers of the Widely Used Bramley Mill.

Bramley Machinery Corporation

Supply Field News

• **Oakite Products, Inc.,** New York, held technical-sales conferences in New York, Cleveland and Hollywood during the month of November. How new materials and improved methods in the field of cleaning and related operations are helping industry meet the demands of increasing production, was the central theme. New materials to be made available by the company were also discussed.

• **Detecto Scales, Inc.,** Brooklyn, announced that Mack Rapp, vice president in charge of sales of the Industrial Division, is holding sales meetings on the West Coast and in Canada, discussing new techniques that have been developed in the use of scales.

• **Wm. J. Stange Co.,** Chicago, announce the appointment of C. A. (Tubby) Wood as General Sales Manager. He succeeds the late Edward J. Marum. Prior to his new appointment Mr. Wood was manager of the Oakland branch of the firm. Mr. Wm. B. Durling, President, made the announcement.

• **A. E. Staley Manufacturing Company,** Decatur, has declared a regular quarterly dividend of 50c and a last quarter of 80c per share on common stock, a total distribution for the year of $2.50. The usual dividend of 93c per share was voted on the $3.75 preference stock.

Merry Christmas

May your Christmas be Happy and your New Year Prosperous

Watch for new things coming in '51

Fondant Machine Headquarters

CONFECTION MACHINE SALES CO.

37 W. Van Buren St. Chicago, Ill.

It Costs Less To Operate Your Equipment Without Scale!

YOU'RE losing money if you let scale build up in steam-jacketed cooking kettles, depositors, mixers, slab tables, other equipment. But you can stop scale fast—step up efficiency, hold down costs—with Oakite Compound No. 32.

This inhibited acidic material dissolves scale completely, without damaging the metal underneath. Removes rust, too . . . restores equipment to first-rate condition. Details FREE. Write Oakite Products, Inc., 36C Thames St., New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING

OAKITE

MATERIALS • METHODS • SERVICE

Technical Service Representatives in Principal Cities of U.S. & Canada

And A Happy New Year!

In the year to come Penford Corn Syrup, Douglas Moulding Starch and Confectioners "C" Starch will continue to play a vital part in candy making.

The Penick & Ford New Year pledge is continued research progress and good cheerful service to confectioners.

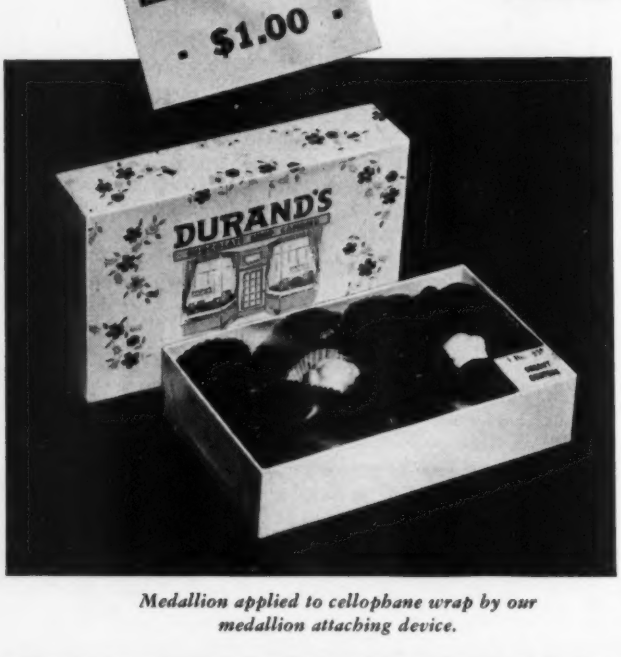
We wish to take this opportunity of wishing all our customers continued success in the year 1951.

PENICK & FORD LTD INC

420 LEXINGTON AVENUE • NEW YORK

Factory CEDAR RAPIDS IOWA

Easily Removed
PRICE LABELS
AUTOMATICALLY ATTACHED BY OUR MODEL FA WRAPPING MACHINE



Medallion applied to cellophane wrap by our medallion attaching device.

The problem of pricing candy boxes in such a way that the price label can be easily detached when a sale is made has been solved.

Our Medallion Attaching Device, furnished with our Model FA wrapping machine, seals only half of the medallion to the package. The lower half showing price is easily torn off by virtue of a perforated line in the label.

Medallions are merely fed into the magazine of the attaching device and from there on the process is automatic. They may be attached to the top of the package in practically any desired location. Minimum size is ¾" x 1⅜". Larger sizes can be accommodated, but different sizes are not interchangeable on any one machine.

This new development adds to the broad versatility of our Model FA—a machine that can wrap cartons, extension-edge boxes, open boats or candy on cards at speeds up to 100 per minute.

Write our nearest office for complete information

Model FA with medallion attaching device wrapping Schrafft candy boxes.

PACKAGE MACHINERY COMPANY
SPRINGFIELD, MASSACHUSETTS
NEW YORK · CHICAGO · BOSTON · CLEVELAND
ATLANTA · DALLAS · DENVER · LOS ANGELES
SAN FRANCISCO · SEATTLE · TORONTO · MEXICO D.F.

Packaging Materials—*a forecast*

given at Packaging Institute fall Meeting

REPORTS of a survey made to establish a ratio between total direct labor and packaging labor by member companies of the Packaging Institute reveal that on an average 60.3% of the labor hours in all food companies reporting were spent in packaging! In making that report to the institute at its twelfth annual forum, which met at New York City October 23 to 25, Charles L. Barr, Executive Vice President of F. B. Redington Company and president of Packaging Institute, stated, "We are practically forced to the conclusion that as far as consumer goods industries are concerned, their principle business is packaging—not the production of the material to be packaged."

While the panel of the first morning's session viewing the outlook for container materials took a rather optimistic viewpoint, there was an edge of cautioning for voluntary curtailments to ward off necessity for regulations in the face of any shortages due to military needs.

Dr. Louis T. Stevenson, Economist for the American Paper and Pulp Association, told the group that "statistically speaking, there is no shortage of pulp, paper and board." Paper is being produced at an annual rate that will show an increase in production by 3 million tons more in 1950 than the 2,300,000 tons in 1949, or an increase of 16% in one year. Ultimate consumption has not increased to that same extent, he pointed out. However inventories of pulpwood and wood pulp were at a low level in July of 1950, commodity prices had been low in the last quarter of 1949, and manufacturers had not rebuilt their inventories. With an advancing price, a strike situation prevented rebuilding depleted inventories. Into that situation came the Korean war, startling the country into a 'fantastic buying spree'. "At paper mills the order back-logs jumped 64% from June to August, while production and shipments were of record proportions," Dr. Stevenson continued, "August production surpassed any monthly production in history and July was the highest on record for that seasonally low month."

Basing his estimate on 1944 data, he stated the amount of paper and board required for direct Government use and by defense plants in the event of war would be 5.6% of the total paper and board production. Last year the industry was carrying one half of that burden, and under all-out war should increase to more than 2.8%. "Overall," he declared, "The problem does not present a serious challenge to the civilian consumption of paper and board. When the scare buying subsides to something like normal there will be an adequate supply of paper and board, and, consequently, of paper and board packaging materials."

As to packaging machinery, G. W. Von Hofe of New Jersey Machine Company, stated, "It is perfectly evident that as time goes on and the defense program expands, packaging machinery will become more difficult to get, particularly those machines designed for a specific purpose." Though no one in the machinery industry had stopped production for lack of materials, he pointed out, design changes are already taking place to accommodate substitutions, "and it is just a matter of months before a definite squeeze will be felt." With "keen understanding of the importance of packaging by the Munitions Board and the various services and the effort put forth by the machinery manufacturers, it is hoped that the necessary materials for an adequate supply of packaging machinery will be provided so as to keep our economy in good working order," he said. "There are hundreds of thousands of packaging machines in use today by all branches of industry. The users of these machines can assist in maintaining a supply of machines by anticipating their requirements." He recommended also a program of preventative maintenance, with an ample supply of parts on hand.

Some felt, he added, that if there is no drastic move in the international situation, the supply of machinery will ease up, but such is not the case. There are several reasons, one supplies and equipment needed for the defense program are mechanical in nature and will consume a tremendous amount of shop time. Second, a great percentage of packaging machinery being purchased today is of the fully automatic type, which requires more shop hours per unit to produce.

However packaging machinery manufacturers have increased their ability to produce, he continued, and new machines are being offered to perform operations at speeds two to five times greater than the same operations were done a matter of two years ago.

Speaking on "Containers in a Semi-War Economy" at noon that day, Roy F. Segur, consultant on containers and packaging of the National Security Resources Board, stated "There is every indication that the prosperity of the country has reached a new high plateau and that our present level of production and not that of the war years or of any other period must be regarded as the benchmark from which to measure future plans." He pointed out, "In other words, the apparent shortages of recent months have not really been due to increased military requirements but have apparently been due to increased civilian demands which have been inspired by the threat of possible future shortages."

Stating the principal effect of the military appropriation has been to spur civilian buying which had begun to lag, he said, "Since packaging is one of the basic industries of the country, it seems entirely logical to presume that, as the economy goes, so will the demand for packaging." Though he stated that it was quite probable materials, labor and facilities will be difficult to get in varying degrees, he urged industry to make the most out of the materials and labor which are available, and to supply its customers fairly and equitably to avoid undue price increases and to fill military requirements, that extensive government controls on industry might be avoided.

Charles A. Lewis, of the National Production Administration of the U. S. Department of Commerce, discussed the question "Can we expect government allocation of packaging materials?" The NPA, he pointed out, was

specifically designated as responsible for (1) determining of requirements of materials needed to maintain national defense, the civilian economy, and the established foreign policies of the U. S. and (2) formulating and executing of policies and programs by which the American economy can meet these requirements. He said industry could take steps now on a voluntary basis, following the pattern of experience gained in the last war, to forestall container controls, by effecting savings in containers and basic raw materials.

The technical sessions of the Forum were highlighted by reports of experiments, many of which have resulted in establishing methods and procedure of potential applicability to the confectionery industry. In many cases the apparatus necessary is relatively simple, as are the procedures.

In opening the technical sessions, Kenneth R. Marvin of Eastman Kodak Company, acting as chairman, stated, the consumer passes judgment on your package when he accepts your product, and urged the necessity of testing. Such tests would result in economies in packaging, he declared, and suggested working closely with suppliers. Mr. Marvin advocated a follow-up program of inspection, with a periodic survey of the new packages to see how they are performing in the field. Many things in the packing operation, he added, might tend to avoid fine quality materials. For that reason he proposed tests be made with the product in the package.

Dr. L. E. Simerl of Marathon Corporation discussed adhesives in food packaging, and stressed close cooperation with the suppliers. "The criterion of any adhesive is fiber pull where paper is involved," he stated, "Although other requirements include: freedom from toxicity and odor, limited setting time, behavior on commercial gluing equipment, mileage and finally cost." A special group in the Marathon laboratory have worked out complete product specifications for certain uses in their plant, which include data and tolerances on solids, solvent, viscosity, freedom from taste, odor and toxicity, bond strength and stability, and includes packaging and shipping instructions. One of the big problems has been that of education, he stated, drumming day in day out to central operator particularly. He said one of the big needs was an adhesive test which will be as acceptable as the Mullen test. In order to raise all standards, he added, it is necessary to break down the secrecy, and someday he hoped there would be a universal adhesive.

In their plant, one man is put in control of the adhesive supply to allot it as required to the operators. Control tests are run on each drum of adhesive received.

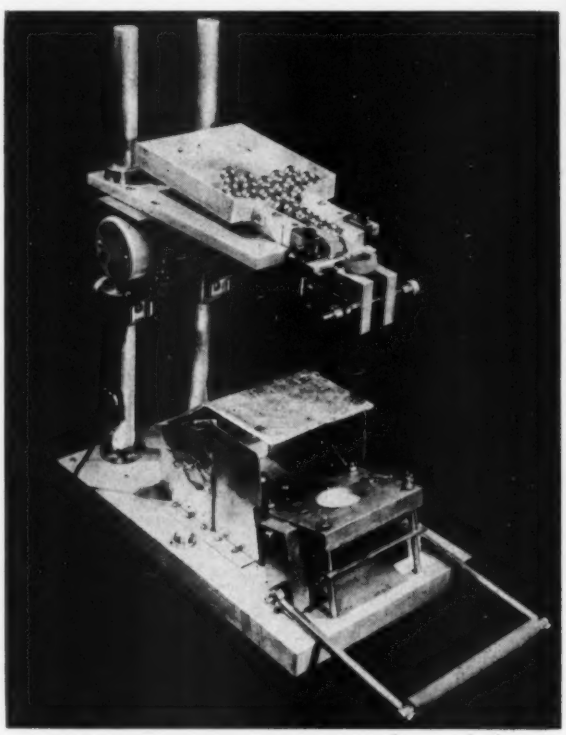
Several unsolved technical problems remain to be solved, Dr. Simerl told the group, including current material shortage difficulties.

Devises now being developed link electronics with statistical quality control to provide automatic statistical control of product quality, R. L. Merrill of Batelle Memorial Institute averred, and such devices have already been applied to the control of weight. Mr. Merrill reported on experiments in electronic control at Batelle, with William Hecox. There are two types of weight fluctuations, he pointed out. One of the pure chance or short-period causes, the second long-period trends. The first are inherent in the process and can be corrected only by a major change in design of the process. The other can often be corrected by a corresponding adjustment to the filling machine. Electronic devices have been developed to perform the functions of detecting long-period trends and for detecting changes in the inherent variability of a process, as well as to automatically adjust the filling machines.

The first essential, Mr. Merrill stated, of an electronic statistical control system is a high-speed measuring instrument. The "selectrol" automatic electronic checkweigher weighs each package on a conveyor and produces an electrical signal proportional to the deviation of the package weight from normal. Also, a signal is transmitted to a suitable servomechanism which automatically adjusts the filling machine. When the weight range is beyond the control limits, warning indicators are operated. Advantages of the system include:

1. Elimination of manual adjustment on filling machine
2. Corrections made only when justified
3. Reduction in over-all variation in package weights
4. Reduction in average overfill
5. Supervision of every package.

Testing for impact fatigue indicates with a fair degree of accuracy the performance to be expected from a filled bag made from the same paper, Robert DeS. Couch, from the Research Department of General Foods Corporation,

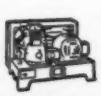


declared. There is no correlation, he pointed out, between the Mullen and drop tests or between the tear test and drop test which will indicate performance. The paper, he stated, is tested one property at a time, while bag performance calls for all stresses. There is relation between the drop test and future performance. The difference is fatigue. With a device worked out in the laboratory at General Foods, steel balls were dropped to a sheet being tested, held at a 15% angle. Good relationship was found between this test for impact fatigue and the drop test. Though a good sheet of paper might be damaged in bag machine, resulting in a faulty bag. Variables in the test for impact fatigue include: moisture, temperature, grain direction, size of ball, height of drop, and number of impacts per minute.

A rapid method of determining humidity equilibria data, which is a graphical interpolation method, has been developed by Arthur H. Landrock and Bernard E. Proc-

Meet the new television professor and his juvenile audience. He's selling candy wrappers. He's teaching basic lesson one—product recognition. Much of the time "impulse candy buyers" can't see the contents so the wrapper must do the selling job. That's why it's important to market a neat, well-sealed package—the kind that Lynch WRAP-O-MATICS turn out at fast production speeds. Make every wrapper count. Wrap on WRAP-O-MATIC for your best product presentation.

PAR AIR COMPRESSORS



PAR REFRIGERATION COMPRESSORS

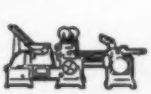
WRAP-O-MATIC CANDY & COOKIE WRAPPING MACHINES

LYNCH CORPORATION

PAR COMPRESSOR DIVISION

TOLEDO, OHIO

MORPAC PAPER PACKAGING MACHINES



MORPAC BUTTER & OLEO CARTONING MACHINES

GLASS FORMING MACHINES

Give your Candy or other Confection "Buy Appeal" with "Eye Appeal"

CANDY packaging lends itself to the use of attractive, colorful, reuseable lithographed cans more than any other commodity. Heekin artists, Heekin lithographers and Heekin color experts work closely with manufacturers who pack their products in Heekin Lithographed Cans. Perhaps we can be of service to you.

HEEKIN *Beautifully Lithographed Cans*

THE HEEKIN CAN CO., CINCINNATI, OHIO

tor from the Department of Food Technology of Massachusetts Institute of Technology. According to Mr. Landrock, it requires relatively inexpensive equipment and is so simple that only semi-skilled technicians are necessary. It is based on measuring rates of loss or gain in moisture content by samples of a product of given moisture content when exposed to atmosphere of different relative humidities.

Controlled conditions are time, temperature, initial weight of sample, initial moisture content of sample, and surface area of sample. The important point, said Mr. Landrock, is to find the relative humidity of the atmosphere where the rate of gain or loss of moisture is zero, in other words, the equilibrium point. The only variable is relative humidity of the test atmosphere. Control of the relative humidity is accomplished by suitable concentrations of sulphuric acid. Apparatus consists of a closed glass crystallizing dish, in the bottom of which is the sulphuric acid. A pan holding the test sample is supported on another glass dish placed directly in the acid.

A number of glass tests chambers are prepared containing appropriate concentrations of sulphuric acid to give the range of relative humidities desired. Runs are made in these chambers with samples of a given product, all with identical initial moisture contents. Duration of test exposure is exactly 1 hour for such substances as a powder. Dense, solid materials, such as hard candies, require longer exposures. Record is made of the milligrams of gain or loss in weight per unit of time. Gains or losses are then plotted against the several relative humidities of the test chambers. Equilibrium relative humidity for a product of a particular moisture content is found where the line, connecting the plotting points, crosses the zero gain-or-loss line.

An instrumental test method for measuring the rate at which odors pass through materials was reported by T. J. Muldoon form the Central Research Laboratories of General Foods Corporation.

The test cell consists of two 125-mm. crystallizing dishes with one dish inverted on top the other. A glass hook mounted in the center of the top dish has a small Petri dish hanging from it. The bottom half is plain. The rims of both dishes are ground flat to ensure reasonably tight sealing against the sample.

Assembled for testing the small Petri dish is half filled with a volatile organic liquid—methyl furoate. A fairly strong solution of potassium hydroxide is placed in the bottom dish and the specimen to be tested mounted between the two dishes.

During storage, the methyl furoate volatilizes to fill the space in the upper half. The vapor diffuses through the test specimen to be picked up in the potassium hydroxide solution, where it is saponified to potassium salt of furoic acid. At the completion of the test period, the amount of furoic acid in the potassium hydroxide solution is measured on the spectrophotometer. The results are expressed as the grams of methyl furoate that would be transmitted by one square meter of test specimen in a 24 hour period.

Some data resulting from tests of this type made with varying humidities, showed that cellophane, glassine and sulfite all had a higher transmission rate at the higher humidity (84%) than they did at the lower (34%). Polyethylene, however, showed very little change.

A comparison of the results obtained on plain glassine and plain sulfite with the results obtained on waxed sheets shows that when 5 lb./3000 sq. ft. of wax is placed on the sheets, the organic vapor transmission rate is reduced to one-fortieth of the value obtained on plain sheets.

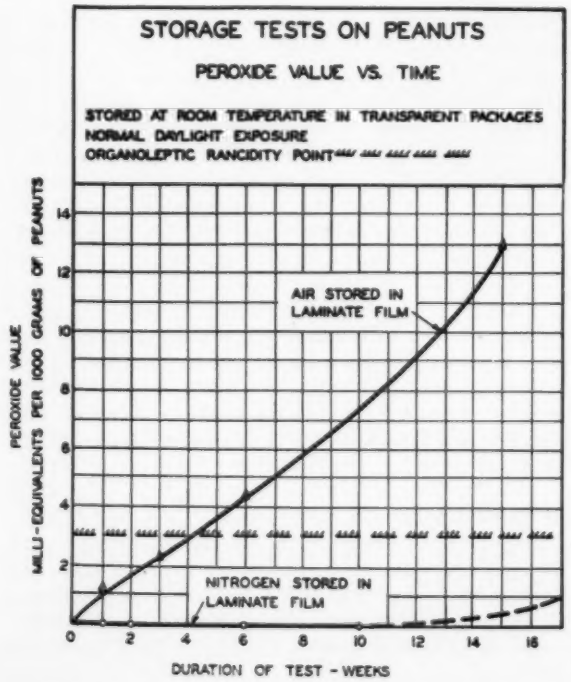
Since the successful use of nitrogen packing depends on a tight package, the Food Technology Laboratory of the Linde Air Products Company has recognized the need for a simple and impersonal leakage test to prove the package air tight, and have made a start toward its development. W. S. Walker, chemical engineer from Linde, reported the method developed, which measures dimensional changes of sealed bags maintained under conditions of controlled inflation by means of a vacuum system.

Equipment consists of a vacuum pump, a glass bell jar and plate, and platform for the sample with a dial indicator rigidly supported above it. The package to be examined is set in position on the platform below the spindle of the indicator and the clearance between the bag and the foot of the spindle is adjusted to approximately ¼ in. The height of the spindle foot above the bag is adjusted to permit appreciable travel of the spindle after the stabilizing period in case the bag leaks.

The jar is lowered into place, the vacuum release valve closed, and the valve to the vacuum pump opened. As the pressure decreases, the package inflates and raises the spindle. ((Vacuum of 15-17 in. of mercury (13-15 in. mercury absolute)). When the desired vacuum is reached, the valve to the pump is closed and the system given a 30-sec. stabilizing period to allow for normal flexing of the film, and a reading of the dial indicator is recorded. A non-leaking package will maintain a static reading on the dial indicator.

Remarkable improvements in shelf life stability of various food products which otherwise deteriorate from oxidative reactions have been realized, Mr. Walker stated. Also nitrogen packing has been used to correct specific complaints in regard to taste, odor, color, rancidity formation, and retention of vitamin content.

One illustration was shown by storage tests on peanuts nitrogen packed in laminated film as compared to control samples air packed. The rancidity point on freshly roasted peanuts had been determined by average taste panels at a peroxide value of 3 milli-equivalents. The


STORAGE TESTS ON PEANUTS
PEROXIDE VALUE VS. TIME
STORED AT ROOM TEMPERATURE IN TRANSPARENT PACKAGES
NORMAL DAYLIGHT EXPOSURE
ORGANOLEPTIC RANCIDITY POINT
PEROXIDE VALUE
MILLI-EQUIVALENTS PER 1000 GRAMS OF PEANUTS
AIR STORED IN LAMINATE FILM
NITROGEN STORED IN LAMINATE FILM
DURATION OF TEST - WEEKS

Smart Candy Buyers

. . . are demanding that their orders be protected with Desiccite #25*—to prevent moisture damage and protect factory freshness, "dryness," gloss, and full flavor. Desiccite #25 eliminates losses and increases turnover.

Candy Manufacturers *are waiting for you to tell them to pack your orders with* Desiccite

Get the facts— *Write your nearest Desiccite distributor*: L. H. Butcher Co., Los Angeles, San Francisco, Portland, Seattle, and Salt Lake City; Eaton Chemical & Dyestuff Co., 1490 Franklin Street, Detroit; Thompson-Hayward Chemical Co., Main Office in Kansas City, Mo., and branch offices throughout principal cities in central and southwestern states.

Dry Pack with DESICCITE #25

Manufactured by

FILTROL CORPORATION General Offices: 727 W. 7th St., Los Angeles 17, California • Plants: Vernon, California; Jackson, Mississippi.

*T.M. REG. U.S. PAT. OFF.

Our Best Wishes
for the
Holiday Season
and the
New Year
Ahead

PETER PARTITION CORP.

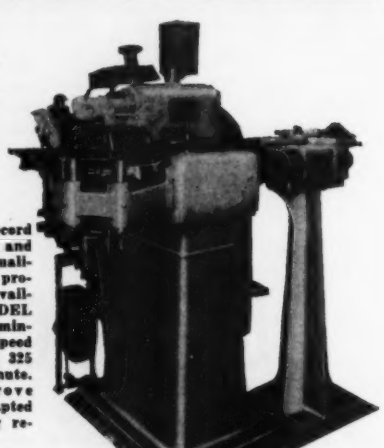
Manufacturers of
Paper Board
Partitions

19-21 HEYWARD ST.
BROOKLYN 11, N. Y.
Telephone: TRiangle 5-4033

IDEAL WRAPPING MACHINES

FAST-EFFICIENT-RELIABLE

CANDY manufacturers both large and small *prefer* IDEAL WRAPPING MACHINES because they provide the economies of fast handling along with *dependable, uninterrupted operation.* In use the world over, IDEAL Machines are building a service record that stands unmatched and unchallenged! Our unqualified guarantee is your protection. Two models available: SENIOR MODEL wraps 160 pieces per minute; the new High Speed Special Model wraps 325 to 425 pieces per minute. Investigation will prove these machines are adapted to your most exacting requirements.



WRITE FOR COMPLETE SPECIFICATIONS AND PRICES

IDEAL WRAPPING MACHINE CO.
MIDDLETOWN, N. Y. U. S. A.
EST. 1906

samples were stored at room temperature under normal daylight exposure for a period of several weeks. The nitrogen packaging maintained a zero peroxide number for a period of ten weeks, at which point the curve started to slope upward to reach only one milli-equivalent at the end of 17 weeks. The air pack control samples held a no-rancid shelf life for a period of four weeks, after which they became rancid.

In the final session of the Forum, C. P. Whittier of Owens-Illinois Glass Company, stated the basic trend in the packaging field was toward mass production, and all industries are going through growing pains.

Charles O. Kendall, director of product planning of E. R. Squibb & Sons, was elected president of the Packaging Institute, with Robert de S. Couch, in charge of packaging development at the central research laboratories of General Foods Corporation, was made vice president. Henry W. Stevens, vice president of Benj. C. Betner Company, was reelected vice president, and F. S. Leinbach of Riegel Paper Corporation, succeeded Mr. Couch as general chairman of the Technical Committees.

William Heller Sr. becomes chairman of the Board

William Heller, Sr. Roland N. Ewens

• **Milprint, Inc.,** Milwaukee, held a luncheon of their executives on October 24th. Mr. William Heller, Sr., president, in celebrating his 65th birthday, announced he was resigning as president to become chairman of the board of directors. Roland N. Ewens, executive vice-president, becomes president and treasurer. Arthur Snapper, now secretary, becomes executive vice-president. Mr. Ewens has been with Milprint 19 years and Mr. Snapper 21 years. The company has grown since it was started by the late M. T. Heller 51 years ago. Mr. William Heller, Sr. joined the organization two years later when they had five employees. The company now has 3,500 employees in 14 plants in 10 cities. Working their way up in the business are four Heller boys, William Jr., and James, sons of William Heller Sr., and Ivan and Melvin, sons of the late M. T. Heller.

• **Dobeckmun Co.,** Cleveland, buys Ben-Mont Papers Inc. of Bennington, Vt. for $1,846,650. Ben-Mont Papers Inc. is a supplier of printed paper and foil gift wrapping. Shipments this year should approach $4,000,000, was reported. Dobeckmun sales in 1950 will exceed 1949 sales by 25% it was also reported.

New Products

• **Leaf Gum Company** is out with "Hot Dogs" bubble gum. The gum is shaped to look like America's favorite food, and the package carries out the idea with a chef, a hot dog stand, and a cute little dog. There's even salt, pepper, mustard and ketchup in the package design. It's a 120-count box and the "hot dogs" are seen through a cellophane window.

• **Hollywood Candy Company** has placed in production during the past few weeks, the new bar Big Pay. The company states that it is a combination of coconut nougat, toasted almonds, caramel and high quality chocolate.

make every store candy mail order headquarters...
with
JIFFY PACKAGED PROGRAM
JIFFY PACKAGED PROGRAM includes Jiffy Insulated Bags—corrugated mailing covers—specially designed order books—shipping labels.
The blueprint of a simple mail order selling plan creates greater sales by insuring perfect arrival of candy. Jiffy Insulated Bags protect chocolates from heat, cold and shipping shocks, and enable any clerk in the store to do a perfect packing job for mail order sales.
Set up a candy mail order department in your store now.
Jiffy
Write today for complete details.
JIFFY MANUFACTURING COMPANY • HILLSIDE, NEW JERSEY

Fanny Farmer Opens New Studio

At the studio dedication, Mr. Cooper, President of the Fanny Farmer Minneapolis 25-Year Club, presented a very attractive piece of luggage to Mr. Hayes on behalf of the associates of the Minneapolis Studio. Miss J. Pierog, on behalf of the Foremen and Foreladies in Minneapolis Studio, presented a lovely leather toilet kit to Mr. Cronin.

The first Fanny Farmer Shop was opened in Minneapolis in 1923 at which time the Studio was located over a store on Western Avenue. The present Studio was purchased in 1936. Candies from the new studio will supply the 31 Fanny Farmer Shops in Minneapolis and surrounding towns.

Mr. Hayes has built the Fanny Farmer business on the theory that meticulous care should and can be applied to the making of fine candies, their distribution and sale. The crisp white curtains and spic-and-span counters and show cases and friendly sales force of Fanny Farmer Candy Shops are retail evidences of these ideals and the same spic-and-span spotlessness persists at the candy making level. In addition, the highest grade butter is purchased in pound prints. Thick sweet fresh cream arrives daily, the various nuts have been chosen after a world search for the best products and then handpicked in the Fanny Farmer Studio. Only pure fruits, pure fruit flavors and grade A eggs, all laboratory checked for purity and quality, are purchased. Last year, 125,000 gallons of fresh Minnesota and Wisconsin cream and 450,000 pounds of butter went into Fanny Farmer candies.

Distribution of the Famous Old-Time Fanny Farmer Candies and Fanny Farmer Salto Nutmeats is done entirely in small batches, by their own trucks and only to Fanny Farmer Candy Shops and as many times daily as their immediate needs require.

CONFECTIONERY BROKERS

New England States

JESSE C. LESSE CO.
Confectionery
Office and Sales Room
161 Massachusetts Ave.
BOSTON 15, MASS.
Territory: New England

Middle Atlantic States

JAMES A. BRADY CO.
1018 Monsey Avenue
SCRANTON 9, PENN.
Phone 2-8658
Concentrated coverage of the candy and food trade in N. E. Penna. "The Anthracite"

ARKANS & ROACH
607 Drexel Bldg.
PHILADELPHIA 6, PENN.
Specializing—Food Trade, Chains Super Markets
Terr: Philadelphia & Eastern Penn.

THOMAS M. BRATTON & CO.
220 Delaware Ave.
BUFFALO, NEW YORK
Covers New York State
Candy & confections

ARTHUR M. CROW & CO.
407 Commonwealth Annex Bldg.
PITTSBURGH 22, PA.
Cover conf. & groc. jobbers, chains, dept. stores, food dists.
W. Pa., W. Va., & E. Ohio

CARL H. HUNSICKER
6261 Magnolia St.
PHILADELPHIA 44, PA.
Candy Broker covering
Philadelphia, Baltimore, Md.
Washington, D. C.

JACK HAAZ
6430 No. Broad St.—Li. 8-5873
PHILADELPHIA 26, PENN.
Terr: Penn., N. Jersey, Balt., Wash.

HERBERT M. SMITH
109-17 110th St.—Virginia 3-8847
OZONE PARK 16, NEW YORK
Terr: New York State

IRVING S. ZAMORE
2608 Belmar Place
SWISSVALE, PITTSBURGH 18, PA.
29 Years Experience
Terr: Pennsylvania, excluding city of Philadelphia

New England States (cont'd)

BLOME BROKERAGE CO.
601 Chumleigh Rd.
BALTIMORE 12, MARYLAND
Candy & Novelties
Covering Wholesale Grocers, Candy & Tobacco jobbers, & chains
Terr: Maryland, Virginia, Delaware and District of Columbia

South Atlantic States

JIM CHAMBERS
Candy Broker
84 Peachtree Street
ATLANTA 3, GEORGIA
Terr: Ga., Ala., and Fla.

WALTER C. McGILL & CO.
Box 812, Lynchburg, Va.
Terr: Virginia, No. & So. Carolina

ROBERT L. MITCHELL, JR. & CO.
1221—12th Avenue
HICKORY, NO. CAR.
Manufacturers' Representative
Candy & Specialty Items
Terr: North & South Carolina

A. CARY MEARS
P. O. Box 2415
ROANOKE, VIRGINIA
Candy and Specialty Items
Terr: Va., W. Va., & No. & So. Car.

WM. E. HARRELSON
Manufacturers' Representatives
5308 Tuckahoe Ave.—Phone 44280
RICHMOND 21, VIRGINIA
Terr: W. Va., Va., N. & S. Car.

ROY E. RANDALL CO.
Manufacturers' Representative
P. O. Box 605—Phone 7590
COLUMBIA 1, SO. CAROLINA
Terr: No. & So. Carolina
Over 25 years in area

BUSKELL BROKERAGE CO.
1135 East Front Street
RICHLANDS, VA.
Contact Wholesale Groceries, Candy Jobbers and National Chains
Terr: Va., W. Va., Eastern Tenn., and Eastern Kentucky

W. M. (BILL) WALLACE
Candy and Specialty Items
P. O. Box 472—111 Rutland Bldg.
DECATUR, GEORGIA
Terr: Ga. & Fla.
Thorough Coverage

JOHN T. SOX CO.
Box 605
COLUMBIA, S. C.
Manufacturers' Representatives
Have been representative for 17 years in the states of South and North Carolina

So. Atlantic States (cont'd)

HUBERT BROKERAGE CO.
Candy and Allied Lines
3 Salesmen
Offices & Display Rooms
210-211 Candler Bldg.
ATLANTA, GEORGIA
Terr: Florida, Georgia and Alabama for 20 years

SAMUEL SMITH
2500 Patterson Ave. Phone 22318
Manufacturers' Representative
WINSTON-SALEM 4, N. CAROLINA
Terr: Virginia, N. Carolina, S. Carolina

East No. Central States

G. W. McDERMOTT
100 North Raymond St.—Phone 382
MARINETTE, WISCONSIN
Terr: Wisc. & Upper Mich.—covered every five weeks.

ROGER ETTLINGER
Phone Townsend 8-5319
16525 Woodward Ave.
DETROIT 3, MICHIGAN
Terr: Entire state of Michigan

WALTER M. GREESON CO.
101 Smith Street
FLINT 3, MICHIGAN
"We Are At Your Service Always —And All Ways"
Terr: Michigan, Estab. Since 1932

BERNARD B. HIRSCH
1012 N. 3rd St.
MILWAUKEE 3, WISCONSIN
Terr: Wis., Ia., Ill. (excluding Chicago) Mich. (Upper Penn.)

HARRY KISSENGER
Candy—Novelties—Specialties
3846 McCormick Ave.
Phone Brookfield 9691
Chicago suburb
HOLLYWOOD, ILLINOIS
Terr: Ohio, Mich., & Ind.

WM. C. MITHOEFER
6210 Tyne Avenue
CINCINNATI 13, OHIO
We specialize in cigars, candies specialties and novelties

H. K. BEALL & CO.
308 W. Washington St.
CHICAGO 6, ILLINOIS
Phones RANdolph 1618-1628
Territory: Illinois, Indiana, Wisconsin
25 years in the Candy Business

ARTHUR H. SCHMIDT CO
815 Erieside Ave.
CLEVELAND 14, OHIO
Terr: Ohio. Member Nat'l. Conf. Salesmen Ass'n.
Buckeye Candy Club

East No. Central States (cont'd)

DONALD A. IKELER
2037 E. Main Street
KALAMAZOO, MICH.
Territory: Michigan

East So. Central States

R. HENRY TAYLOR
Candy Broker
Box 1456—Phone 4-2763
LEXINGTON, KENTUCKY
Territory: Kentucky and Tennessee

A. C. BURNETT COMPANY
Candy Brokers
4806 Rossville Blvd.
CHATTANOOGA, TENN.
A crack team of six Southern salesmen. Ky., Tenn., Miss., Ala., Fla., Ga., S. C., N. C., Va., W. Va.
If it will sell in Dixie—we can sell it.

FELIX D. BRIGHT & SON
Candy Specialties
P. O. Box 177—Phone 8-4097
NASHVILLE 2, TENNESSEE
Terr: Kentucky, Tennessee, Alabama, Mississippi, Louisiana

J. L. FARRINGER CO.
FRANKLIN, TENNESSEE
Established 1924
Territory: Tenn., Ky., and W. Va.
3 Salesmen covering territory

HURD-MORELAND CO.
MORELAND, KENTUCKY
Sales Representation Candy bars, Specialties
Terr: Kentucky, East Tennessee

West No. Central States

BUHRER BROKERAGE CO.
Candy Manufacturers' Sales Agents
819 W. Third St.
DAVENPORT, IOWA

ELMER J. EDWARDS CANDY BROKERAGE
5352 31st Ave. So.
MINNEAPOLIS 17, MINN.
Phone: Pa. 7659
Terr: Minn., N. & S. Dak.—Special attention given to Twin City trade

GRIFITHS SALES COMPANY
725 Clark Ave.—Phone GA. 4979
SAINT LOUIS 2, MISSOURI
We specialize in candy and novelties.
Terr: Mo., Ill., and Kan.

O. W. TAYLOR BROKERAGE CO.
McGREGOR, IOWA
Cover confectionery & grocery jobbers, chain-Dept. stores, Food Dist. Nebraska, Iowa, Minnesota Wisconsin.

West So. Central States

W. S. STOKES
Broker & Agent
BATESVILLE, ARKANSAS
Candy - Novelties - Specialties
Terr: Arkansas—Accounts solicited

WM. E. MIRACLE COMPANY
301 No. Market St.
DALLAS TEXAS
Territory: Texas & Oklahoma

Mountain States

CAMERON SALES COMPANY
2870 Ivy
DENVER 7, COLORADO
Candies and Allied Lines
Terr: Colo., Mont., Idaho, Utah, N. Mex.

MAYCOCK BROKERAGE CO.
573 West 2nd South
SALT LAKE CITY, UTAH
An eight man organization representing manufacturers for 76 confectionery, tobacco, drug and grocery jobbers in Utah-Idaho territory.

Mountain States (cont'd)

JERRY HIRSCH
Manufacturers' Representative
Candy and Specialty Items
4111 E. 4th St.
TUCSON, ARIZONA
Territory: Arizona, New Mexico & El Paso, Texas

FRANK X. SCHILLING
Confectionery and Novelty Items
Box 416—Phone 2-3540
BUTTE, MONTANA
Complete coverage of Montana, Idaho, and northern Wyoming, including Casper

G & Z BROKERAGE COMPANY
New Mexico—Arizona El Paso County Texas
P. O. Box 227 ALBUQUERQUE N. Mex.
Personal service to 183 jobbers, super-markets and department stores. Backed by 26 years experience in the confectionery field. We call on every account personally every six weeks. Candy is our business.

Pacific States

GEORGE R. STEVENSON CO.
Terminal Sales Building
SEATTLE, WASHINGTON
Territory: Wash., Ore., Ida., Mont.
Over 20 years in this area.

CARTER & CARTER
Confectionery Mfr's Agents
Established with Industry since 1901
91 Connecticut St.
Phone: Main 7852
SEATTLE, WASHINGTON
Terr: Wash., Ore., Utah, Idaho, Mont., Nev., Wyo.

BELL SALES COMPANY
100 Howard Street
SAN FRANCISCO 5, CALIFORNIA
Candy & Food Specialties
Terr: Calif., Reno, Nev., Hawaiian Islands

J. RAY FRY & ASSOCIATES
420 Market St.—Phone Garfield 7690
SAN FRANCISCO, Calif.
Terr: Calif., Ore., Wash., Mont., Ida., Utah, Wyo., Nev., Ariz.

Pacific States (cont'd)

GENE ALCORN & CO.
1340 E. 6th Street
LOS ANGELES 21, CALIFORNIA
383 Brannan Street
SAN FRANCISCO 7, CALIFORNIA
Territory: State of California

MALCOLM S. CLARK CO.
1487½ Valencia St.
No. Cal., Nev., & Hawaii
SAN FRANCISCO 10, CALIF.
923 E. Third St.—Southern California
LOS ANGELES 13, CALIF.
Terminal Sales Bldg.
Wash., N. Idaho
SEATTLE 1, WASH.
903 Park Road
Ariz., New Mex., W. Texas
EL PASO, TEXAS

I. LIBERMAN
SEATTLE 22, WASHINGTON
Manufacturers' Representative
1705 Belmont Avenue
Terr: Wash., Ore., Mont., Ida., Utah, Wyo.

HARRY N. NELSON CO.
112 Market St.
SAN FRANCISCO 11, CALIF.
Established 1906
Sell Wholesale Trade Only
Terr: Eleven Western States

• **Royal Metal Mfg. Co.,** Chicago., has announced the election of Hobart A. Green as president, filling the vacancy created by the death of Irving Grombacher.

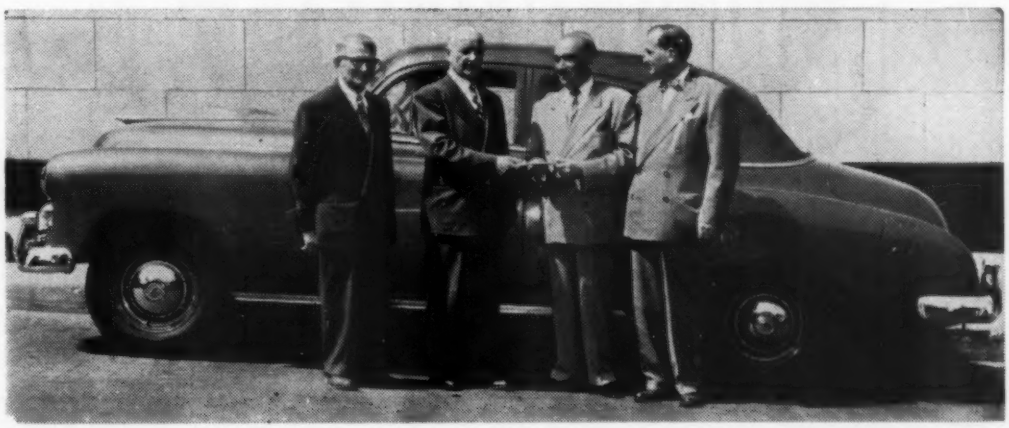
• **Minneapolis-Honeywell Regulator Company,** Philadelphia, has set up an independent sales organization for its valve division. The nucleus of the new organization will consist of regional sales manager.

• **The Roto Bag Machine Corp.** has appointed Packaging Equipment Sales Co., of Toronto, Canada, as its exclusive representatives in Eastern Canada. West of the continental divide will still be served by Mailler-Searles, Inc., from their Seattle office.

• **Dr. R. H. Lueck** was appointed general manager of research for the American Can Co. the latter part of September. Dr. Lueck, who has been associated with the firm for 28 years, has been serving as manager of sales for the company's Pacific Division.

• **Mary Lee Candies, Inc.,** showed a net loss of $19,276 on sales of $2,071,847 for the year ending Feb. 25. This was compared with a net income of $70,747 on sales of $2,202,126 for the previous year.

• **The Williamson Candy Co.** has renewed for the fifth year their "True Detective Mystery" program over the Mutual network, Adolf N. Hult, MBS president announced early in September.



William Lakritz, President of Florasynth Laboratories, Inc., and treasurer of the Jerome D. Solomon Research Foundation affiliated with the Hektoen Institute participates in the presentation of a 1950 Chevrolet sedan as a gift to A. C. (Ed) Gignac, advertising manager of the South End Reporter. Pictured, are: Hyman Winograd, of the Roseland Music Shop, representative of the foundation on the South Side; A. C. Gignac, accepting the bill of sale for the 1950 Chevrolet, Mr. Solomon, founder of the foundation named in memory of his son, Dr. Jerome D. Solomon, who died in service overseas during World War II; and William Lakritz, treasurer of the foundation.

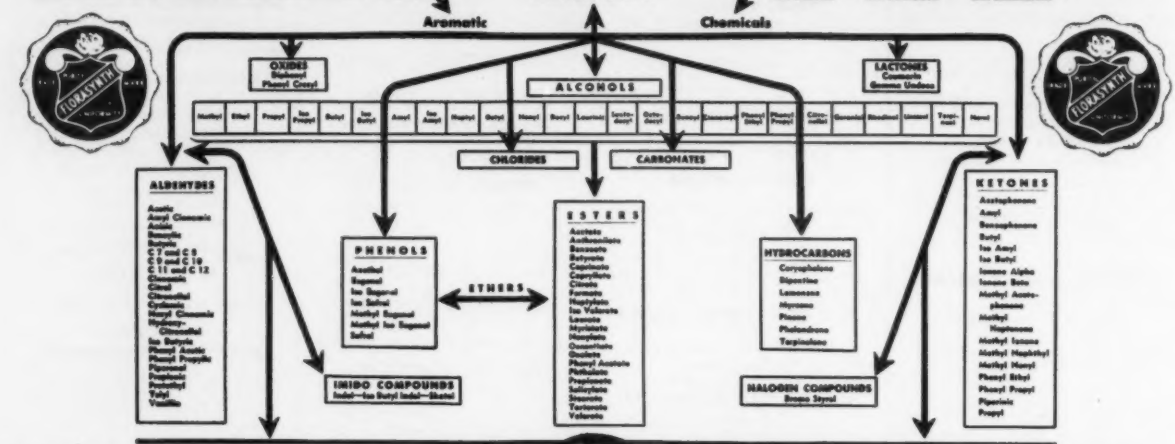
FLORASYNTH LABORATORIES, INC.

MID-WEST DIVISION
CHICAGO · DALLAS · DETROIT · MEMPHIS · MINNEAPOLIS · NEW ORLEANS · ST. LOUIS

MANUFACTURING CHEMISTS
NEW YORK 61, N. Y.

PACIFIC COAST DIVISION
LOS ANGELES · SAN FRANCISCO · SAN BERNARDINO

Aromatic · Chemicals



JAN. · MAR. · AP · NE · JUI · PT. · OCT. · DEC.

Year in Year out..

DEPENDABILITY

Florasynth LABORATORIES, INC.
CHICAGO 6 · NEW YORK 61 · LOS ANGELES 13

DALLAS 1 · DETROIT 2 · MEMPHIS 1 · NEW ORLEANS 13
ST. LOUIS 2 · SAN BERNARDINO · SAN FRANCISCO 11
Florasynth Labs. (Canada Ltd.)
Montreal · Toronto · Vancouver · Winnipeg
Florasynth Laboratories de Mexico S. A. — Mexico City

The MANUFACTURING CONFECTIONER'S Clearing House

POSITION WANTED

Candy Superintendent looking for position in a small plant. Experienced in manufacturing all types of Panned Candies, also complete line of Starch work in Mogul department. Employed in this capacity and will be available after December 15th. Box A-1204, **The MANUFACTURING CONFECTIONER.**

HELP WANTED

CHEMIST specializing in Chocolate Mfrg. Must have exp. in process control and raw material testing. Exc. opportunity with progressive company located in Chicago. All replies will be treated in confidence. Box A-1209, **The MANUFACTURING CONFECTIONER.**

FOREMAN for chocolate dept. of Chgo. Mfrer. Must be able to adjust machinery for grinding and conching. Supervise roasting beans and be able to lead men in production. Write full particulars and salary requirements. Box A-1206, **The MANUFACTURING CONFECTIONER.**

Chocolate Pan-Men, experienced, wanted. MARLON, 321 West 54th St., N. Y. C.

MACHINERY FOR SALE

Complete Shell machine with aluminum tunnel, depositor, tempering column, kettle and molds. Immediate delivery. Box A-1208, **The MANUFACTURING CONFECTIONER.**

FOR SALE: 4 ft. Ball Cream Beater with 3 hp. motor. $500.00 fob Chicago. Call or write George Tiberius, 820 N. State St., Chicago, Ill.

Subscribe to

THE MANUFACTURING CONFECTIONER

Only $3.00 per year—$5.00 for 2 years.

- **Feature Articles**
- **Candy Clinic**
- **Candy Packaging**
- **Candy Equipment Preview**
- **Technical Literature Digest**
- **Manufacturing Retailer**
- **Book Reviews**

And many other features

9 S. Clinton — CHICAGO 6

CLASSIFIED ADVERTISING

When addressing box numbers, please address as follows:
(Box Number)
The Manufacturing Confectioner
9 South Clinton St.
Chicago 6, Ill.

Classified insertion requests are sent to the same address. Rates are 35c per line of regular type; 70c per line for bold face or capital letters; $6 per column inch for display. Minimum insertion is three lines. Rates are not subject to agency discounts.

MACHINERY WANTED

WILL BUY POP WRAPPING MACHINES
STATE SERIAL AND MODEL NUMBER
CASH PRICE
School House Candy Co.
P.O. Box 1243
Providence, R. I.

WANTED: Wood Starch Trays—14½" x 32", wood trays for drying gums, etc., also 2-150 gal. steam kettles with double action agitators for 100 lb. pressure. Box B-11015, **The MANUFACTURING CONFECTIONER.**

WILL PAY CASH FOR PACKAGE MACHINERY
MODEL 22B
Wrapping Machines
School House Candy Co.
P.O. Box 1243
Providence, R. I.

WANTED—1 Baker Perkins high-speed pop machine. Topps Chewing Gum, Inc., 237 37th St., Brooklyn 32, N. Y.

WANTED—1 automatic or semi-automatic ball machine. Topps Chewing Gum, Inc., 237 37th St., Brooklyn 32, N. Y.

WANTED: Several Transwrap Machines. Will pay good price. Box A-1207, **The MANUFACTURING CONFECTIONER.**

WANTED: Rose 500 cutting and wrapping machine. State condition, age, best cash price. Box A-1203, **The MANUFACTURING CONFECTIONER.**

MACHINERY WANTED (Contd.)

Wanted for immediate purchase—1 Lynch Wrap-O-Matic bar wrapping machine with automatic roll speed. State model and serial number. Peter Shorin, Topps Chewing Gum, 237 37th St., Brooklyn 32, N. Y.

WANTED: Copper Coating or Revolving Pans. State condition, size and price. Box A-1205, **The MANUFACTURING CONFECTIONER.**

BUSINESS FOR SALE

FIRST TIME OFFERED FOR SALE: Thirty-year-old, established package chocolate factory. Small. Approximate value $30,000 without building. Owner retiring. Fine clientele. Midwest city. Box B-1101, **The MANUFACTURING CONFECTIONER.**

Atlantic City candy shop for sale. Established 5 years. 100% location, good reason for selling. Box A-1202, **The MANUFACTURING CONFECTIONER.**

MISCELLANEOUS

WE BUY & SELL

ODD LOTS • OVER RUNS • SURPLUS

"Cellophane" BAGS

SHEETS • ROLLS • SHREDDINGS

Cellophane rolls in outer boxes 100 lb. or more

ALSO MADE OF OTHER CELLULOSE FILM

Wax - Glassine Bags, Sheets & Rolls

Tying Ribbons—All Colors & Widths **Scotch Tape Clear & Colors**

Diamond "Cellophane" Products

Harry L. Diamond **Robert I. Brown**

"At Your Service"

74 E. 28th St., Chicago 16, Illinois

If You Are Contemplating Relocating
you should request a copy of
"BUSINESS OPPORTUNITIES IN WATERTOWN, SOUTH DAKOTA"
call or write
Mayor Gilbert
or the City Promotional Director, J. G. Ihnet

WANTED: Obsolete-discontinued-sizes and surplus corrugated and fibre cartons. Regal Box Co., 1835 No. 30th St., Milwaukee, Wisc.

Use M.C. Classified Advertising to Sell or Buy Used Equipment.

18th ANNUAL EDITION

The Candy Buyers' 1951 DIRECTORY ISSUE

DISPLAY YOUR LINE in this proven advertising medium

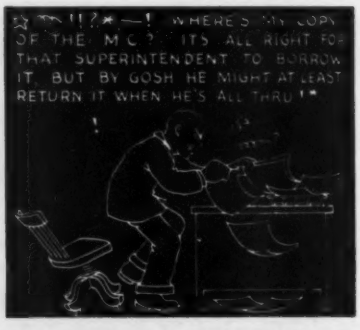
MAKE SURE your company supplies us with information on your wholesale line, then back up advertising to keep the constant attention of buyers focused on your line.

CLOSING DATE: DECEMBER 1st.

The CANDY BUYERS' DIRECTORY

9 South Clinton St., Chicago 6, Ill. 303 W. 42nd St., New York 18, N. Y.

"Keep Your Temperature Down"


WHERE'S MY COPY OF THE M.C.? IT'S ALL RIGHT FOR THAT SUPERINTENDENT TO BORROW IT, BUT BY GOSH HE MIGHT AT LEAST RETURN IT WHEN HE'S ALL THRU!"

The Manufacturing Confectioner
9 S. Clinton Chicago 6, Ill.

Don't get excited when you can't find your copy of the "M.C." Just sit down and mail this coupon with your check of $3.00 for one year or $5.00 for two years, and you'll get your extra copy. Why not see that each key man in your organization gets a copy? Then there won't be any "disappearing" copies to keep you from referring to it as often as you wish. Write now!

THE MANUFACTURING CONFECTIONER
9 S. Clinton Street
CHICAGO 6, ILLINOIS
"O.K. here's my check! We need more copies of the "M.C." around here!
☐ 1 yr. $3.00. ☐ 2 yrs. $5.00.
Name .....
Company .....
Street .....
City ..... State ..... Zone No. .....

19

The fo
the twe
A limit

Admini

Chase
(p.
Fannie
High
(p.
Federa
(p.
How
Act
Jan.
John
(p.
Manuf
(p.
Manuf
(p.
Mars
Nov
New
abili
Off T
Pensio
(p.

Air Co

Mars,
air
mer
Desig
nel
29)

Associ

AAC
(p.
AAC
Los
AAC
ACC
Adels
Ass
AMC
ARC
Jun
ARC
20)
Chem
Chica
Sep
Esser
(p.
IFT
NAT
fec
NCA
(p.
NCA
Jun
NCA
Yo
NCA
Oc
NCA
tio
NCA
(p.
NCA
Jul

or De

1950 EDITORIAL INDEX

The following is a summary of the articles which have appeared in the twelve issues of *The Manufacturing Confectioner* during 1950. A limited number of bound volumes are available.

Administration—

Chase Sets Pace in Union Relations, (p. 66), Aug.
Fannie May Legislates for Lasting High Morale Among Employees, (p. 26), Aug.
Federal Food, Drug, and Cosmetic Act, (p. 217) Sept.
How Changes in the Wage and Hour Act Effect Your Business, (p. 27), Jan.
John Casani Speaks to Congressmen, (p. 58), Aug.
Manufacturers Study Walsh-Healy Act, (p. 36), May
Manufacturers Hear Service Needs (p. 18), Sept.
Mars New Retirement Plan, (p. 57), Nov.
New York Confectioners Provide Disability Benefits, (p. 31), Mar.
Off The Cuff, (p. 14), Jan.
Pensions Pose Problems, Editorial, (p. 70), Jan.

Air Conditioning—

Mars, Inc., Streamlines refrigeration, air conditioning with modern equipment (p. 26), July.
Design Consideration for Cooling Tunnel: Part I (p. 25) Nov. Part II (p. 29) Dec.

Associations—

AACT Discusses Chocolate Standards, (p. 22), July
AACT Meeting Themes Production Losses in Reverse, (p. 42), May
AACT Sets Lehigh Date, (p. 41), Aug.
ACCM Elects Burbank, (p. 28), Apr.
Adelson to head N. Y. Confectionery Ass'n. (p. 105), June
AMCC Honors Haug, (p. 63), Feb.
ARC Convention Program, (p. 26), June
ARC Elect Frederick President, (p. 20), July
Chemical Convention, (p. 20), Oct.
Chicago Club Headed by Udill, (p. 23), Sept.
Essential Oil Assn. Report on Flavors, (p. 56), July
IFT Meeting Reported, (p. 23), July
NATD Proposes Program for Confectionery Industry, (p. 28), May
NCA, Chicago Fair's Candy Day, (p. 17), Sept.
NCA Convention Program, (p. 24), June
NCA Council on Candy Meets in New York, (p. 26), Apr.
NCA Drafting Specifications, (p. 22), Oct.
NCA Looks to the Future at Convention, (p. 17), July
NCA Names Convention Committees, (p. 33), Mar.
NCA New Officers Elected, (p. 19), July
NCA Production Forum Discussion, (p. 28), Aug.; (p. 14), Sept.; (p. 50), Oct.
NCA Report No. 18, Testing Effectiveness of Antioxidants, (p. 8), Jan.
NCA Report No. 19, Calcium Carbonate Tests, (p. 20), Apr.
NCA Report No. 19, Calcium Carbonate Experiments, (p. 12), May
NCWA John Casani Speaks to Congressmen, (p. 58), Aug.
NCWA Mid-Century Progress Convention in New York, (p. 39), May
NCWA To Meet May 31, (p. 56), June
NCWA Report, (p. 62), July
NEMCA Sponsors Candy Makers Lectures, (p. 28), Feb.
New York Confectioners Provide Disability Benefits, (p. 31), Mar.
Packaging Institute revamps program, (p. 62), Oct.
PMCA Conference Program, (p. 48), Jan.
PMCA Hears Gott on Present Emergency, (p. 27), Aug.
PMCA Meets to Fight Back, (p. 44), June
PMCA Lehigh Conference Features Quality Control, (p. 46), June
PMCA Sets Lehigh Date, (p. 13), Sept.
SWCA Convention, (p. 19), Sept.

Book Reviews—

Antoinette Pope School Candy Book, (p. 65), Mar.
Business Ideas Handbook, (p. 98), June
Buying and administering Corporate Insurance, (p. 18), Apr.
Chocolate and Confectionery, (p. 64), Oct.
The Essential Oils, (p. 18), Jan.
Food Industries Manual, (p. 65), Mar.
Freeze-Drying, (p. 64), Oct.
Glassine and Greaseproof, (p. 14), Mar.
Modern Silk Screen Printing, (p. 65), Aug.
Monetary Management, (p. 18), Apr.
Outlines of Food Technology, (p. 64), Oct.
Production Series, (p. 64), Oct.
Sales Managers Handbook, (p. 48), Aug.
Sugar Research Report No. 6, (p. 14), Mar.
Wholesale Buying Centers for Retailers in Deep Central South, (p. 65), Mar.

Calcium Carbonate—

Experiments and Tests, (p. 20), Apr.; (p. 12), May
Data Submitted to F.D. and C., (p. 65), Oct.
NCA Looks to the Future, (p. 19), July
NCA Production Forum Discussion, (p. 28), Aug.

Candy Clinic—

All Bar Goods; Five Cent Numbers, (p. 21), Sept.
Assorted Chocolates; Current Items, (p. 44), Mar.
Chews; Brittles; Current Items, (p. 46), Feb.
Chocolates, Bars, and Current Items, (p. 50), Apr.
Easter Candy Items Analyzed, (p. 52), May
Goods Now on the Market, (p. 66), June
Gums; Jellies and Undipped Bars, (p. 48), July
Hard Candies and Holiday Items, (p. 45), Jan.
Summer Candies and Packages, (p. 50), Aug.
10c - 15c - 25c Packages, (p. 45), Oct.
Cordial Cherries, Panned Goods (p. 53) Nov.
Best Selections for the Year (p. 38) Dec.

Candy Promotion—

Candy Forecast for 1950, Editorial, (p. 70), Feb.
Chicago Fair's Candy Day, (p. 17), Sept.
NCA Council on Candy Meets in New York, (p. 26), Apr.
PMCA Meets to Fight Back, (p. 44), June
Premium Sales, (p. 45), Aug.
Sweetest Day Plans Underway, (p. 27), Oct.
30 Selling Days Can Boost Your Mother's Day Sales, (p. 30), Mar.

Chocolate—

Care of Modern Chocolate Refiners, (p. 29), Jan.
Carle & Montanari Exhibits in Chicago, (p. 37), Oct.
Chocolate Chemist Explains Use of Taste Panel, (p. 8), Sept.
Chocolate and the Cocoa Bean (p. 27) Dec.
Can We Simplify Chocolate Handling? (p. 34) Dec.
Cocoa Butter—Crystallization Habits and Effect on Chocolate, (p. 57), Apr.

Confectionery Industry—

NCA Production Forum Discussion, (p. 28), Aug.; (p. 14), Sept.
Confectionery Industry—
Candy Forecast for 1950, Editorial, (p. 70), Feb.
NATD Proposes Program for Confectionery Industry, (p. 28), May
USDC Estimates 1949 Confectionery Sales, (p. 6), Sept.

Conventions—

ARC Convention Program, (p. 26), June
Chemical Convention, (p. 20), Oct.
NCA Convention Program, (p. 24), June
NCA Looks to the Future at Convention, (p. 17), July
NCA Production Forum Discussion, (p. 28), Aug.; (p. 14), Sept.; (p. 50), Oct.

NCWA Mid-Century Progress Convention in New York, (p. 39), May
National Packaging Exposition, (p. 83), June
Quality Control Featured at Lehigh Conference, (p. 46), June
Super-Mart Institute Convention, (p. 63), July
SWCA Convention, (p. 18), Sept.

Corn Sugar, Syrup, Starch—

Corn Syrup Offers Many Advantages in Candy Making, (p. 23), Apr.
Helpless Henry Continues, (p. 95), June
NCA Production Forum Discussion, (p. 28), Aug.; (p. 50), Oct.

Directory Data—

Equipment and Machinery Suppliers, (p. 34), Sept.
Flavor Suppliers, (p. 116), Sept.
Geographical Index of Suppliers, (p. 230), Sept.
Merchandising Aids, (p. 206), Sept.
Miscellaneous Candy Factory Items, (p. 214), Sept.
Packaging and Packaging Equipment, (p. 178), Sept.
Raw Material Suppliers, (p. 134), Sept.
Trade Names: Equipment and Machinery, (p. 111), Sept.: Flavors and Raw Materials, (p. 170), Sept.: Merchandising Aids and Packaging, (p. 209), Sept.

Editorials—

Candy Forecast for 1950, (p. 70), Feb.
Distribution Planning, (p. 70), Jan.
Pensions Pose Problems, (p. 70), Jan.
General Review of Confections for 1950 (p. 72) Dec.

Flavorings—

Chocolate Chemist Explains Use of Taste Panel, (p. 8), Sept.
Flavor Suppliers, (p. 116), Sept.
How Flavor Control Aids Candy Sales Appeal, (p. 25), Mar.
How Flavor Control Can Stimulate Repeat Sales of Candy, (p. 25), Feb.
Making Own Flavors No Answer for Flavor Control, (p. 21), Oct.
Molasses as Used in Flavoring Candy, (p. 24), May
New Synthetics for Flavors, (p. 21), Jan.
Orange Oils Supplies Short, (p. 18), Sept.
Report on Flavors, (p. 56), July
Sweetness as a Factor in Flavor Control, (p. 42), June

Formulae—

Nonpareils and Sugar Wafers, (p. 16), Mar.
H. R. Coffee Creams, (p. 10), Apr.
Crystallized Ginger and Kumquats, (p. 79), Apr.
Pralines (p. 27), Apr.
Butter Scotch Toffee and Honey Nougatine, (p. 47), May
Old Fashioned Peppermint Stick, (p. 48), May
Pulled White Creamy Mints, (p. 18), May
White Hard Candies and Caramel with 10% Dried Milk Whey, (p. 55), May
Chocolate Coated Caramel and Pecan, H. R. Creams, French Chocolate, and Marzipan, (p. 100), June
Coconut Kisses, Cakes and Croquettes, (p. 101), June
Full Cream Caramel, Pecan Goodie, Question Caramel, (p. 54), June
Cream Centers and Peppermint Patties, (p. 44), Aug.
Waffles, (p. 56), July
Assorted Caramallows, Clear Anise Squares, Genesee Caramel, Pecan Clusters, (p. 25), Oct.
Vinegar Toffee, (p. 49), Oct.
Butterscotch Squares (p. 37) Dec.

Gelatin—

Specifications for Gelatin in Candy, (p. 27), Feb.

Ingredients—

Calcium Carbonate Experiments, (p. 12), May
Calcium Carbonate Tests, (p. 20), Apr.
Candy Forecast for 1950, Editorial, (p. 70), Feb.
Candy Making for Beginner, 1, (p. 19), Oct.; (p. 49) Nov.
Chocolate—See chocolate listing
Cocoa Butter—Crystallization Habits and Effect on Chocolate, (p. 57), Apr.
Corn Syrup Offers Many Advantages in Candy Making, (p. 23), Apr.
Federal Food, Drug and Cosmetic Act, (p. 217), Sept.
Helpless Henry Continues, (p. 95), June
How Flavor Control Aids Candy Sales Appeal, (p. 25), Mar.
How Flavor Control Can Stimulate Candy Repeat Sales, (p. 25), Feb.
How to Use Tapioca Starch in Candy Production, (p. 27), Mar.
Labor, Space Costs Cut by Efficient Sugar Handling, (p. 47), Aug.
Making Own Flavors No Answer for Flavor Control, (p. 21), Oct.
Molasses as Used in Flavoring Candy, (p. 24), May
NCA Production Forum Discussion, (p. 28), Aug.; (p. 14), Sept.; (p. 50), Oct.
New Synthetics for flavors (p. 21) Jan.
Orange Oil Supplies Short, (p. 18), Sept.
PMCA Hears Gott on Present Emergency, (p. 27), Aug.
Quality Control Featured at Lehigh Conference, (p. 46), June
Report on Flavors, (p. 56), July
Retail Run on Sugar Eases, (p. 20), Sept.
Specifications for Gelatin in Candy, (p. 27), Feb.
Substantial Savings, Efficiency in Sugar Handling, (p. 23), Oct.
Suppliers of Flavors, (p. 116), Sept.
Suppliers of Raw Materials, (p. 134), Sept.
Sweetness as a Factor in Flavor Control, (p. 42), June
Sweet potatoes Score in Candy, (p. 64), June
Testing Effectiveness of Antioxidants, (p. 8), Jan.

Labor—

Chase Sets Pace in Union Relations, (p. 66), Aug.
How Change in the Wages and Hour Law Effect Your Business, (p. 27), Jan.
Manufacturers Study Walsh-Healey Act, (p. 36), May
New York Confectioners Provide Disability Benefits, (p. 31), Mar.

Legislation—

Calcium Carbonate Data (p. 65), Oct.
How Changes in the Wage and Hour Law Effect Your Business, (p. 27), Jan.
Federal Food, Drug and Cosmetic Act, (p. 217), Sept.
John Casani Speaks to Congressmen, (p. 58), Aug.
Manufacturers Study Walsh-Healey Act, (p. 36), May
PMCA Hears Gott on Present Emergency, (p. 27), Aug.

Machinery and Equipment—

Candy Making for the Beginner, 1, (p. 19), Oct.
Carle & Montanari Exhibits in Chicago, (p. 37), Oct.
Care of Modern Chocolate Refiners, (p. 29), Jan.
Continuous Mixing, (p. 11), Sept.
Design Considerations for Candy cooling funnels, Part 1, (p. 25), Nov. Part II (p. 29) Dec.
Labor, Space costs Cut by Efficient Sugar Handling, (p. 47), Aug.
Largest Machinery Exhibits Since War Seen by Confectioners, (p. 28), July
Machinery and Factory Equipment, (p. 34), Sept.
Mars, Inc., Streamlines Refrigeration, Air conditioning with Modern Equipment, (p. 26), July
Rosemarie de Paris Looks Ahead, (p. 39), Apr.
Substantial Savings, Efficiency in Sugar Handling, (p. 23), Oct.
The House that Clark built, (p. 31), Nov.
Two Engineers Join Skills to Pioneer in Confectionery Machinery, (p. 29), Oct.
What's New in Candy Equipment, (p. 36), Jan., (p. 42), April, (p. 36), July, (p. 32) Oct.

Maintenance—

Care of Modern Chocolate Refiners, (p. 29), Jan.
How Loft Solves Fondant Clean-up Problems, (p. 26), May
Plant Sanitation and Housekeeping, (p. 29), Apr.

Management—

Chase Sets Pace in Union Relations, (p. 66), Aug.

Fannie May Legislates for Lasting High Morale Among Employees, (p. 26), Aug.
How Changes in the Wage and Hour Law Effect Your Business, (p. 27), Jan.
Israel Confectionery Company Survives Wars to Become Industrial Factor, (p. 23), Aug.
John Casani Speaks to Congressmen, (p. 58), Aug.
Mason's New Candy Plant, (p. 24), Jan.
Mars New Retirement Plan, (p. 57), Nov.
Modern Swiss Firm Stresses Quality Candy, (p. 23), Feb.
New York Confectioners Provide Disability Benefits, (p. 31), Mar.
Off The Cuff, (p. 14), Jan.
Pensions Pose Problems, Editorial, (p. 70), Jan.
Personnel, Quality at Macy's, (p. 90), June
PMCA Hears Gott on Present Emergency, (p. 27), Aug.

Manufacturers—

Gilbert's 50th Anniversary, (p. 21), May
How La Marquise de Sevigne of France Emphasizes Packaging, (p. 29), May
Israel Confectionery Company Survives Wars to Become Industrial Factor, (p. 23), Aug.
Lindt & Sprungli, Ltd., (p. 22), Feb.
Mason's New Candy Plant, (p. 24), Jan.
No Substitute for Quality Ingredients, (p. 60), June
Rosemarie de Paris Looks Ahead, (p. 39), Apr.
The house that Clark built, (p. 31), Nov.

Manufacturing Retailer—

Candy Making for the Beginner, I, (p. 19), Oct., (p. 49) Nov. II (p. 36) Dec.
Dutch Chocolate Shops Achieve Success through Holland Motif, (p. 38), Aug.
Efficiency, Economy for Retail Manufacturers, (p. 52), June
Emphasis on Sanitation, (p. 41), Feb.
How to Make Pralines, (p. 27), Apr.
Success Formula for Pioneers, (p. 25), Oct.
30 Selling Days Can Boost Your Mother's Day Sales, (p. 30), Mar.
Time Tested Formulas for the Manufacturing Retailer, (p. 47), May

Merchandising—

Bunte, Belvend Plan National Sales Program, (p. 76), June
Candy Bar Buyers and Brand Preference, (p. 28.), Mar.
Candy Merchandising in Drug Stores, (p. 36), Nov.
Chicago Packaging Talks Emphasize Retail Appeal, (p. 83), June
De Met's Seeks to Institutionalize Their Packaging, (p. 61), Oct.
Distribution Planning, Editorial, (p. 70), Jan.
Dutch Chocolate Shops Achieve Success through Holland Motif, (p. 38), Aug.
83% of U. S. Theatres Sell Candy in Lobby, (p. 62), Mar.
Flash Appeal Candy Packages Sell at a Glance, (p. 65), Apr.
Gilbert's 50th Anniversary, (p. 21), May
Imagination and Initiative Keynote Latest Candy Packages, (p. 57), Mar.
Loft Adopts Design for Small Stores, (p. 39), June
Mason's New Candy Plant, (p. 24), Jan.
NATD Proposes Program for Confectionery Industry, (p. 28), May
NCWA Report, (p. 62), July
No Substitute for Quality Ingredients, (p. 60), June
Off The Cuff, (p. 14), Jan.
Packaging Emphasis Seen for '50, (p. 59), Jan.
Packaging for Perfection at Loft's, (p. 33), Nov.
Personnel, Quality at Macy's, (p. 90), June
Pliofilm—Present and Potential Uses in Packaging, (p. 59), July
Premium Sales, (p. 45), Aug.
Premium Users, (p. 53), Aug.
Quality Plus eye-appeal Bring Repeats for Kresge-Newark, (p. 55) Nov.
Schuster's Adopts New Candy Line, (p. 92), June
Suppliers of Merchandising Aids, (p. 206), Sept.
30 Selling Days Can Boost Your Mother's Day Sales, (p. 30), Mar.

Nutrition—

Nutrition Charts Seen, (p. 22), July
PMCA Meets to Fight Back, (p. 44), June
Sugar Aids Growth, (p. 103), June

Packaging—

Candy Packaging Clinic, (p. 32), Feb.; (p. 31), May; (p. 34), Aug.
Chicago Packaging Talks Emphasize Retail Appeal, (p. 83), June
DeMet's Seeks To Institutionalize Their Package, (p. 61), Oct.
Design Trends in Competitive Packaging, (p. 31), Aug.
Flash Appeal Candy Packages Sell at A Glance, (p. 65), Apr.
How La Marquise de Sevigne of France Emphasizes Packaging, (p. 29), May
How To Use Adhesives In Your Packaging, (p. 29), Feb.
Imagination and Initiative Keynote Latest Candy Packages, (p. 57), Mar.
Modern Swiss Firm Stresses Quality Candy, (p. 23), Feb.
Norris Streamlines Package, (p. 16), Sept.
No Substitute for Quality In Ingredients, (p. 60), June
Packaging Emphasis Seen for '50, (p. 59), Jan.
Packaging for Perfection At Loft's, (p. 33), Nov.
Packaging Institute Revamps Program, (p. 62), Oct.
Packaging Materials—A Forecast (p. 55) Dec.
Pliofilm—Present and Potential Uses In Packaging, (p. 59), July
Rosemarie de Paris Looks Ahead, (p. 39), Apr.
Schuster's Adopts New Candy Line, (p. 93), June
Super-Mart Convention, (p. 63), July
Suppliers of Packaging Materials, (p. 178), Sept.

Patents—

Chocolate Masses, (p. 14), Apr.
Chocolate Mixer, (p. 14), Mar.
Chocolate Products, (p. 14), Mar.
Coconut Confection, (p. 27), Oct.
Coconut Processing, (p. 27), Oct.
Confection Apparatus, (p. 16), Apr.
Sugar Purification, (p. 14), Apr.
Vanilla Flavoring, (p. 27), Oct.

Production—

Calcium Carbonate Tests, (p. 20), Apr.
Candy Forecast for 1950, Editorial, (p. 70), Feb.
Care of Modern Chocolate Refiners, (p. 29), Jan.
Continuous Mixing, (p. 11), Sept.
Corn Syrup Offers Many Advantages In Candy Making, (p. 23), Apr.
Design Considerations For Candy Cooling Tunnels, (p. 25), Nov.
Helpless Henry Continues, (p. 94) June
How Flavor Control Aids Candy Sales Appeal, (p. 25), Mar.
How Flavor Control Can Stimulate Candy Repeat Sales, (p. 25), Feb.
How Loft Solves Fondant Clean-Up Problem, (p. 26), May
How To Use Adhesives In Your Packaging, (p. 29), Feb.
How To Use Tapioca Starch In Candy Production, (p. 27), Mar.
Israel Confectionery Company Survives Wars To Become Industrial Factor, (p. 23), Aug.
Labor Space Costs Cut by Efficient Sugar Handling, (p. 47), Aug.
Making Own Flavors No Answer For Flavor Control, (p. 21), Oct.
Molasses As Used In Flavoring Candy, (p. 24), May
NCA Production Forum Discussion, (p. 28), Aug.; (p. 14), Sept.; (p. 50), Oct.
Plant Sanitation and Housekeeping, (p. 29), Apr.
Quality Control Featured at Lehigh Conference, (p. 46), June
Specifications For Gelatin In Candy, (p. 27), Feb.
Substantial Savings, Efficiency in Sugar Handling, (p. 23), Oct.
Sweetness as a Factor in Flavor Control, (p. 42), June
Testing Effectiveness of Antioxidants, (p. 8), Jan.
Two Engineers Joined Skills to Pioneer in Confectionery Machinery, (p.29), Oct.

Rations for Armed Services—

Manufacturers Hear Service Needs, (p. 18), Sept.
NCA Drafting Specifications, (p. 22), Oct.

Research—

Calcium Carbonate Experiments, (p. 12), May
Calcium Carbonate Tests, (p. 20), Apr.
Manufacturers Hear Service Needs, (p. 18), Sept.
NCA Production Forum Discussion, (p. 28), Aug.; (p. 14), Sept.
New Synthetics for Flavors, (p. 21), Jan.
Quality Control Featured at Lehigh Conference, (p. 46), June
Sweet Potatoes Score in Candy, (p. 64), June
Testing Effectiveness of Antioxidants, (p. 8), Jan.

Sales Figures—

Brach's Retail Survey, (p. 16), Sept.
Candy Bar Buyers and Brand Preferences, (p. 28), Mar.
83% of U. S. Theatres Sell Candy in Lobby, (p. 62), Mar.
USDC Estimates 1949 Confectionery Sales, (p. 6), Sept.

Sanitation—

Continuous Mixing, (p. 11), Sept.
Emphasis on Sanitation, (p. 41), Feb.
How Loft Solves Fondant Clean-Up Problem, (p. 26), May
Federal Food, Drug and Cosmetic Act, (p. 217), Sept.
Plant Sanitation and Housekeeping, (p. 29), Apr.

Shipping—

Chicago Packaging Talks Emphasize Retail Appeal, (p. 83), June

Sugar and Molasses—

Labor, Space Costs cut by Efficient Sugar Handling, (p. 47), Aug.
Molasses As Used in Flavoring Candy, (p. 24), May
Retail Run on Sugar Eases, (p. 20), Sept.
Substantial Savings, Efficiency in Sugar Handling, (p. 23), Oct.
Sugar Aids Growth, (p. 103), June

Surveys—

Brach's Retail Survey, (p. 16), Sept.
Candy Bars and Brand Preference, (p. 28), Mar.
Consumer Analysis, (p. 43), Aug.
83% of U. S. Theatres Sell Candy in Lobby, (p. 62), Mar.
USDC Estimates 1949 Confectionery Sales, (p. 6), Sept.

Tapioca Starch—

How to Use Tapioca Starch in Candy Production, (p. 27), Mar.

Technical Literature Digest—

Abstracts (p. 26), Jan.; (p. 10), Mar.; (p. 14), Apr.; (p. 97), June; (p. 67), Aug.; (p. 27), Oct.

INDEX TO AUTHORS

Allured, P. W.
From the Desk of the Publisher, (p.32), Sept.
Off the Cuff, (p.14), Jan.
Publisher Speaks— (p. 7) Dec.

Baldwin, Clara
Candy Merchandising in drug stores, (p.38) Nov.
La Marquise de Sevigne of France Emphasizes Packaging, (p.29), May
Largest Machinery Exhibit Since War Seen at Grand Central Palace, (p.28), July
Loft Adopts Designs for Small Stores, (p. 39), June
Modern Swiss Firm Stresses Quality Candy, (p. 23), Feb.
New York Confectioners Provide Disability Benefits, (p.31), Mar.
Packaging for Perfection at Loft's, (p.33), Nov.
Quality plus eye-appeal bring repeats for Kresge-Newark, (p.55), Nov.
Barron, J. Lloyd
Plant Sanitation and Housekeeping, (p.29), Apr.
Beasley, Roy
Efficiency, Economy for Retail Manufacturers, (p.52), June
Brock, F. Hanley
Corn Syrup Offers Many Advantages in Candy Making, (p.23), Apr.

Childs, Wesley H.
How Flavor Control Aids Candy Sales Appeal, (p.25), Mar.
How Flavor Control Can Stimulate Repeat Sales of Candy, (p.25), Feb.
Making Own Flavors No Answer for Flavor Control, (p.21), Oct.
Sweetness as a Factor in Flavor Control, (p.42), June
Clark, Jr., D. L.
The House that Clark Built, (p.31), Nov.
Clunan, A. B.
Pliofilm—Present and Potential Uses in Packaging, (p.59), July
Conant, William J.
Rosemarie de Paris Looks Ahead, (p.39), Apr.

Downey, Thomas B.
Specifications for Gelatin in Candy, (p.27), Feb.

Gott, Philip, P.
Candy Forecast for 1950, (p.70), Feb.
Grant, Marie
No Substitute for Quality Ingredients, (p.60), June

Hall, Clyde C.
Flash Appeal Candy Packages Identify and Sell at a Glance, (p.65), Apr.
Imagination and Initiative Keynote Latest Candy Packages, (p.57), Mar.
Packaging Emphasis Seen for '50, (p.59), Jan.

Kempf, Norman W.
Cocoa Butter, Crystallization Habits, Effect on Chocolate, (p.57), Apr.
Chocolate and the Cocoa Bean (p. 27) Dec.
King, James A.
Molasses as Used in Flavoring Candy, (p.24), May

Lanham, Jr., Ben T.
Sweet Potatoes Score in Candy, (p.64), June
Lawren, Joseph
Emphasis on Sanitation, (p.41), Feb.
Lehmann, Eric
General Review of Confections for 1950 (p. 72) Dec.
Leighton, Alfred E.
Candy Making for the Beginner, Lesson 1, (p.19), Oct.
Candy Making for the Beginner, Lesson 1—continued, (p.49), Nov.
Lesson II (p. 36) Dec.
Lenz, Earl C.
How to Use Tapioca Starch in Candy Production, (p. 27), Mar.
Lowry, Grier
Personnel, Quality at Macy's, (p.90), June

Mayhew, James E.
Success Formula for Pioneers, (p.25), Oct.
Time Tested Formulas for the Manufacturing Retailer, (p.47), May
Meyers, E. W.
Chocolate Chemist Explains Use of Taste Panel, (p.8), Sept.
Mickevicz, Melvyn J.
Can We Simplify Chocolate Handling? (p. 34) Dec.

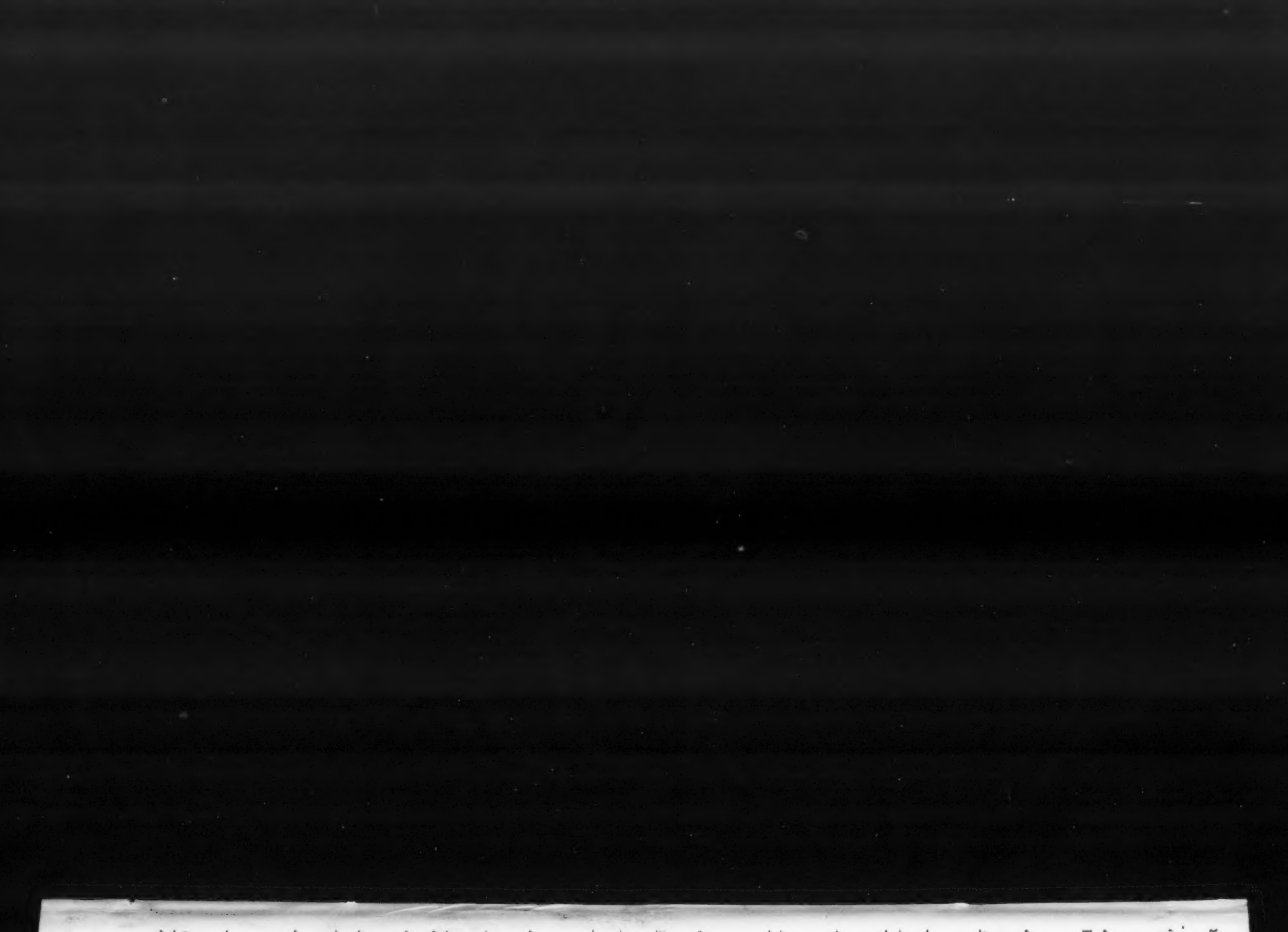
Pinney, Richard C.
NATD Proposes Program for Confectionery Industry, (p.28), May

Richmond, Walter L.
How to Make Pralines, (p.27), Apr.

Salmon, J. E.
Mars, Inc., Streamlines Refrigeration, Air Conditioning with Modern Equipment, (p.26), July
Design considerations for candy cooling tunnels, Part I (p.25), Nov. Part II (p. 29) Dec.
Schuller, Sam
How To Use Adhesives in Your Packaging, (p.29), Feb.
Seldner, Abraham
New Synthetics for Flavors, (p.21), Jan.

Unterberger, S. Herbert
How Changes in the Wage and Hour Law Effect Your Business, (p.27), Jan.

Wiemer, H. K.
Care of Modern Chocolate Refiners, (p.29), Jan.



"A CANDY YEAR BOOK AND A BUYING GUIDE ALL IN ONE"

Since the first issue in 1921, THE MANUFACTURING CONFECTIONER has been recognized as the "technical magazine of the confectionery industry."

The only publication devoted exclusively to the manufacturing branch of the confectionery industry, THE MANUFACTURING CONFECTIONER offers invaluable help in candy production, packaging, and merchandising problems.

This "Purchasing Executives' Number" combines in one, convenient issue authentic, finger-tip information on all individual products used in the manufacture of confectionery as well as industry-wide articles, statistics, and charts.

Make sure *all* your key personnel have *all* this valuable information by subscribing for them now to THE MANUFACTURING CONFECTIONER. A one-year subscription at $3 includes this "Purchasing Executives' Number" and 11 other regular monthly issues. A two-year subscription includes this "Purchasing Executives' Number" and 23 monthly issues.

Individual copies of this "Purchasing Executives' Number" are, however, available, while the supply lasts, at $2 a copy.

Save your firm time and money by subscribing *now*.

The MANUFACTURING CONFECTIONER
9 South Clinton St.,
Chicago 6, Ill.

Advertisers' INDEX

Aluminum Cooking Utensil Co., The ..... Sept. '50
Ambrosia Chocolate Co. 44
American Food Laboratories, Inc. 50
American Machine & Foundry Co. Oct. '50
American Paper Goods Co. ..... Nov. '50
Anheuser-Busch, Inc. 16
Armour & Co. ..... Oct. '50
Aromanilla Co. Inc., The ..... Oct. '50
Associated Bag & Apron Co. ..... July '50

Baker Div., Franklin General Foods Corp. 17, 18
Baker Chocolate and Cocoa, Walter Div. of General Foods Corp. 33
Baywood Manufacturing Co., Inc. 51
Best Foods, Inc., The 48
Blanke-Baer Ext. & Pres. Co. ..... June '50
Bramley Machinery Corp. 52
Blumenthal Bros. ..... Sept. '50
Burke Products Company, Inc. 49
Burrell Belting Co. ..... Oct. '50

California Almond Growers Exchange .. 8
California Fruit Growers Exchange 6, 14, 73
Camp Co., Inc., W. A. ..... Nov. '50
Carle & Montanari, s.a. 21
Carver, Inc., Fred S. ..... Sept. '50
Cell-O-Core, Corp. ..... Apr. '50
Chocolate Spraying Co. 44, 51
Cincinnati Aluminum Mould Co. Sept. '50
Clinton Foods Inc. 22
Confection Machine Sales Co. 53, 67
Corn Products Refining Co., Inc., ... Nov. '50
Corrigan Co., Inc., J. C. 40
Crest Laboratories 41
Currie Manufacturing Co. ..... Nov. '50

Detecto Scales, Inc. ..... Oct. '50
Diamond Cellophane Products 65
Dispersion Equipment Sales Co. 35
Dodge & Olcott, Inc. 11
Dow Chemical Co., The ..... June '50
Dubin Corp., R. M. ..... Sept. '50
Durkee Famous Foods, Div. of Glidden Co. ..... Nov. '50

Economy Equipment Co. ..... Nov. '50
Exact Weight Scale Co. ..... Nov. '50

Harry L. Friend Co. ..... Sept. '50
Filtrol Corp. 59
Florasynth Laboratories, Inc. 64
Food Materials Corp. ..... July '50
Fritzsche Bros., Inc. 4
Funsten Co., R. E. 50

General Mills, Inc. ..... Nov. '50
Glidden Company ..... Nov. '50
Groen Mfg. Co. ..... Nov. '50
Greer Co., J. W. 52

Hayssen Mfg. Co. ..... Nov. '50
Heat Seal It Company ..... June '50
Heekin Can Co., The 58
Hildreth Pulling Machine Co. ..... Mar. '50
Hooten Chocolate Co., The 52
Hubinger Co., The ..... Nov. '50
Hudson-Sharpe Machine Co. ..... Nov. '50

Ideal Wrapping Machine Co. 80

Jiffy Manufacturing Co. 81

Kiwi Coders Corp. 44
Kohnstamm & Co., Inc., H. 9

Lamont, Corliss & Co. 50
Land O'Lakes Creameries, Inc. 19
Lehmann Company, Inc., J. M. 15
Liquidometer Corp. ..... Oct. '50
Lueders & Co., Geo. ..... Nov. '50
Lynch Corp., Package Machine Division 57

Magnus, Mabee & Reynard, Inc. 2
Merckens Chocolate Co., Inc. 42
Mid States Gummed Paper Co. ..... July '50
Miller Wrapping & Sealing Machine Co. ..... Nov. '50
Mill River Tool Co. ..... Oct. '50

National Equipment Corp. 12, 13
National Food Products Co. ..... May '50
National Sugar Refining Co., The 47
Neumann-Buslee & Wolfe, Inc. 51
Norda Essential Oil & Chemical Co., Inc. ..... 4th Cover
Nulomoline Division, American Molasses Company ..... Oct. '50

Oakite Products, Inc. 53
Olive Can Company ..... Nov. '50

Package Machinery Company 54
Penick & Ford, Ltd., Inc. 53
Peter Partition Corp. 60
Peerless Confectionery Equip. Co. Sept. '50
Pfizer & Co., Inc., Chas. 10
Phillips Co., Inc., Charles R. ..... August '50
Pitt & Sons Co., The C. M. 23
Polak's Frutal Works, Inc. 20
Preferred Milk Products, Inc. ..... Sept. '50

Racine Confectioners' Machinery Co. 33
Refined Syrups, & Sugars, Inc. 26
Riegel Paper Corp. ..... Nov. '50
Ross & Rowe, Inc. ..... Oct. '50

Savage Bros. Co. 39
Robert E. Savage Co. ..... Sept. '50
Senneff-Herr Company ..... Sept. '50
Sheffman, John 43
Shellmar Products Corp. ..... July '50
Smith & Sons, Inc., W. C. ..... Sept. '50
Solvay Sales Division, Allied Chemical & Dye Corp. ..... Nov. '50
Speas Company 41
Staley Mfg. Co., A. E. ..... Nov. '50
Standard Casing Co., Inc., The 40
Stehling Co., Chas. H. ..... Sept. '50
Stromberg Time Corp. ..... June '50
Sugar Information, Inc. 24
Sweetnam, Inc., Geo. H. ..... Nov. '50
Swift & Co. ..... Oct. '50

Taft Co., R. C. 43
Thilmany Pulp & Paper Co. ..... July '50
Triumph Mfg. Co. ..... July '50

Union Confectionery Machinery Co., Inc. ..... Nov. '50
Union Starch & Refining Co. ..... Nov. '50

Vacuum Candy Machinery Co. 33
Van Ameringen-Haebler, Inc. 3
Voorhees Rubber Mfg. Co., Inc. 46
Voss Belting & Specialty Co. ..... Sept. '50

Warfield Co., The 25
Weinman Bros., Inc. ..... Sept. '50
Werner & Sons, Inc., John 40, 45
W-E-R Ribbon Corp. 41
Whitson Products Div. of the Borden Company ..... June '50
Wittenmeier Machinery Co. ..... Sept. '50
Wyomissing Glazed Paper Co. .... Oct. '50

EDITORIAL

General Review of Confections for 1950

by **ERIC LEHMAN**
Superintendent, Candy Clinic

The past year has been an encouraging one in the bar field. We find that there has been a decided improvement in bars. The quality and workmanship in most bars has been bettered and is, in general, on the up grade.

This year, we did not select any Fudge, Milk Chocolate Bars, and a few other kinds of confections as "the best of the year" because we examined a large number of these various types of bars and found most of them were good. The same can be said for jelly and gum assortments.

Assorted Chocolates

On the other hand, we find that assorted chocolates show anything but improvement. Cheap coatings, poor dipping, cheap centers, and very cheap flavors were the general rule, making the candy unappetizing and unattractive to the consumer. We did find some very different and novel boxes, but the consumer does not eat the box!

Hard Candies

Hard candies for the most part are well made, but again, very cheap, imitation flavors are the main fault of this type of confection.

At a time when the candy industry is trying to entice new customers, it is a poor commentary that flavors in all confections are getting worse. We find a large amount of imitation flavors and extracts are being used instead of true flavors which make the candy taste like "more". Regardless of how well the confection is made, or how attractive it may look, if it doesn't contain a good flavor, it isn't good eating.

Chocolate Coatings

Next we come to Chocolate Coatings, both milk and dark. Recently we examined a box of assorted chocolates at $1.75 the pound, manufactured by one of the large manufacturing concerns. Although it is hard to believe, we found that the coating was not as good as some we found on several 5c bars and in some assorted chocolates priced from 30c the pound and up.

More Careful Workmanship Needed

The following are a few of the major faults to be found in the confections on the market today:

Nougatines are like salt water taffy.
Cream centers are chewey.
Fudges are hard and tough: some chew like a caramel.
Sponges are like solid, hard candy.
Marshmallow is like rubber and too frequently quite tasteless.
Caramels are hard, tough, and have a strong taste of condensed milk.
Jellies have a texture that is similar to rubber.
Hard candies have no flavor but plenty of acid.
Dark centers have a strong taste of scrap.

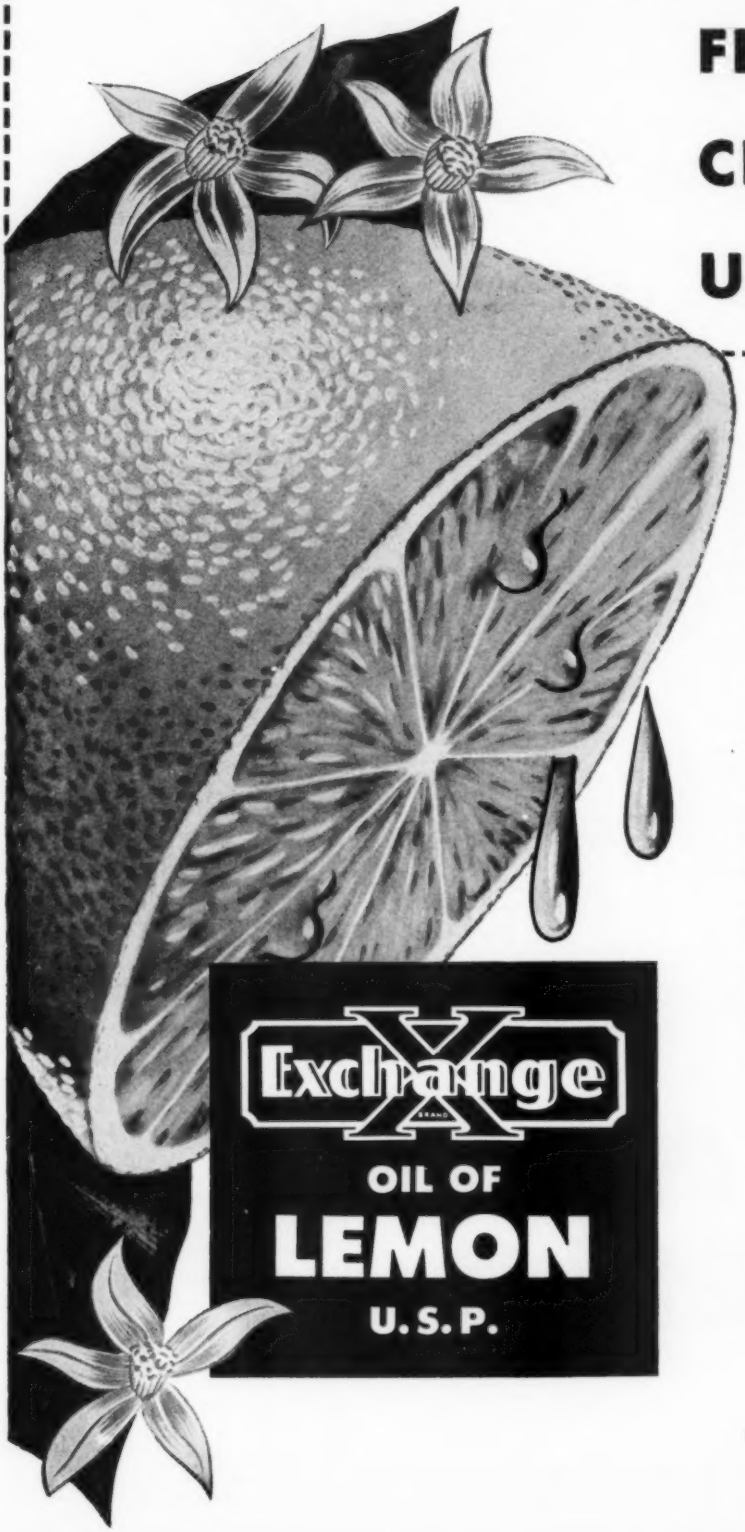
We could continue on and on, but suffice it to say that the packaged chocolates on the market today are a long way from the highest standards of quality, particularly in comparison to what they were some years ago.

As always, we find that a few (very few) of the old time manufacturers are maintaining their high standards of quality and are giving the consumer true value in candy money. These houses will still be in business and will still be enjoying a fair profit when the others have fallen by the wayside.

We wish all our friends a Happy and Prosperous New Year.

8 out of 10 say it's *best* for

FLAVOR
CLARITY
UNIFORMITY



Yes, more than 80% of all the lemon oil used in the United States is Exchange Lemon Oil!

This overwhelming endorsement by the trade is your guarantee that Exchange Lemon Oil delivers *quality*... quality in the form of superior *flavor* and unmatched *clarity* and *uniformity*.

Always specify it by the brand name when you order— Exchange Oil of Lemon. For complete satisfaction, accept no other brand.

Distributed in the United States exclusively by
FRITZSCHE BROTHERS, INC.
76 Ninth Avenue, New York 11, N. Y.

DODGE & OLCOTT, INC.
180 Varick Street, New York 14, N. Y.

Distributors for:
CALIFORNIA FRUIT GROWERS EXCHANGE
Products Department, Ontario, Calif.

Producing Plant:
Exchange Lemon Products Co., Corona, Calif.

Some use Christmas bells...

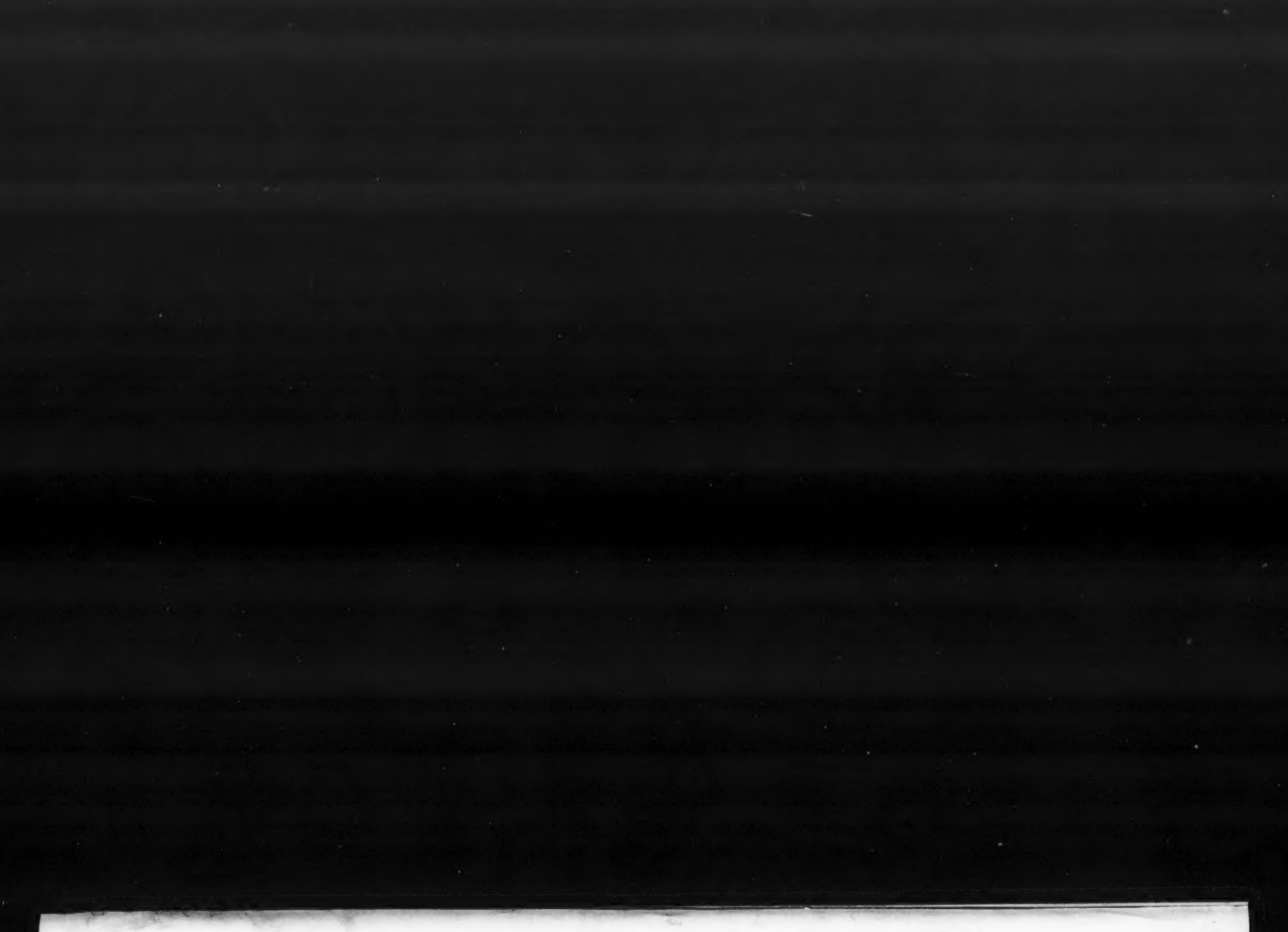
Some use Christmas holly...

Some use a fat Santa Claus,
Round, red, and jolly...

But our wish takes all of them,
See? They're all here—
To say...

MERRY CHRISTMAS!

And a BRIGHT GOOD next year!

Norda ESSENTIAL OIL AND CHEMICAL COMPANY, INC., 601 West 26th Street, New York 1, N. Y.

CHICAGO • LOS ANGELES • ST. PAUL • MONTREAL • TORONTO • HAVANA • MEXICO CITY • LONDON • PARIS